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The World Bank

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Report No: PAD2484

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR70.6 MILLION
(US$100 MILLION EQUIVALENT)

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FOR A

ETHIOPIA RESILIENT LANDSCAPES AND LIVELIHOODS PROJECT

July 9, 2018

Environment & Natural Resources Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 31, 2018)

Currency Unit	=	Ethiopian Birr (ETB)
ETB 27.52	=	US$1
SDR 1	=	US$0.70589066

FISCAL YEAR
July 8 – July 7

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ABBREVIATIONS AND ACRONYMS

AGP	Agricultural Growth Program
BoA	Bureau of Agriculture
CBPWDG	Community Based Participatory Watershed Development Guidelines
CDD	Community Driven Development
CDP	Commune Development Program
CF	Community Facilitator
CGIAR	Consultative Group on International Agricultural Research
CIG	Community Investment Group
CPF	Country Partnership Framework
CRGE	Climate Resilient Green Economy
CSA	Climate Smart Agriculture
CSRP	Community Storage Receipts Program
CWT	Community Watershed Team
DA	Development Agent
DFID	Department for International Development (United Kingdom)
EFA	Economic and Financial Analysis
EMP	Environmental Management Plan
ESIF	Ethiopia Strategic Investment Framework
ESMF	Environmental and Social Management Framework
FHH	Female-Headed Households
FTC	Farmer Training Center
FY	Fiscal Year
GCF	Green Climate Fund
GEF	Global Environment Facility
GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit* (German Development Agency)
GoE	Government of Ethiopia
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Services
GTP	Growth and Transformation Plan
ICS	Individual Consultant Selection
IDA	International Development Association
IGA	Income Generating Activity
KLAUC	Kebele Land Administration and Use Committee
KWT	Kebele Watershed Team
LIFT	Land Investment for Transformation Project
LSWI	Land Surface Water Index
M&E	Monitoring and Evaluation
MDTF	Multi-Donor Trust Fund
MoALR	Ministry of Agriculture and Livestock Resource
MoFEC	Ministry of Finance and Economic Cooperation
MoWIE	Ministry of Water, Irrigation and Electricity
MSE	Micro and Small Enterprise
MYDP	Multi-Year Development Plan

NDVI	Normalized Difference Vegetation Index
NRLAIS	National Rural Land Administration Information System
NRM	Natural Resource Management
PCA	Procurement Capacity Assessment
PDO	Project Development Objective
PES	Payment for Environmental Services
PIM	Project Implementation Manual
PPR	Post Procurement Review
PPSD	Project Procurement Strategy Document
PSNP	Productive Safety Net Program
PCU	Project Coordination Unit
REILA	Responsible and Innovative Land Administration Project
RLLP	Resilient Landscapes and Livelihoods Project
RPF	Resettlement Policy Framework
SA	Social Assessment
SDP	Social Development Plan
SLLC	Second Level Landholding Certification
SLM	Sustainable Land Management
SLMP-I	Sustainable Land Management Project Phase-I
SLMP-II	Sustainable Land Management Project Phase-II
SLWM	Sustainable Land and Water Management
SORT	Systematic Operations Risk-rating Tool
SURED	Sustainable Use of Resources for Economic Development
TA	Technical Assistance
UAV	Unmanned Aerial Vehicles
WB	World Bank
WLRC	Water and Land Resource Centre
WMUP	Watershed Management and Use Plan
WoANR	Woreda Office of Agriculture and Natural Resources
WoLAU	Woreda Office of Land Administration and Use
WUA	Watershed User Association

BASIC INFORMATION

Country(ies)	Project Name	
Ethiopia	Ethiopia Resilient Landscapes and Livelihoods Project	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P163383	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
30-Jul-2018	07-Jul-2024

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To improve climate resilience, land productivity and carbon storage, and increase access to diversified livelihood activities in selected rural watersheds.

Components

Component Name	Cost (US$, millions)
Green Infrastructure and Resilient Livelihoods	78.50

Investing in Institutions and Information for Resilience	12.50
Rural Land Administration and Use	23.00
Project Management and Reporting	15.00

Organizations

Borrower:	Ministry of Finance and Economic Cooperation
Implementing Agency:	Ministry of Agriculture and Livestock Resource

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	129.00
Total Financing	129.00
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Credit	100.00

Non-World Bank Group Financing

Counterpart Funding	10.00
Borrower	10.00
Trust Funds	19.00
Free-standing Cofinancing Trust Fund	19.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Total Amount
National PBA	100.00	0.00	100.00

Total	**100.00**	**0.00**	**100.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025
Annual	4.21	11.07	18.88	22.18	21.15	16.89	5.63
Cumulative	4.21	15.27	34.15	56.34	77.49	94.37	100.00

INSTITUTIONAL DATA

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Agriculture, Climate Change, Energy & Extractives

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Low
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate

5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	Moderate
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37	✓	
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description
Section I.B.1 of Schedule 2: The Recipient shall implement the Project in accordance with the Project Implementation Manual, which shall be updated within one (1) month after the Effective Date in form and substance satisfactory to the Association, setting forth the rules, methods, guidelines and procedures for the carrying out of the Project.

Sections and Description
Section I.B.4 of Schedule 2: The Recipient shall select, and cause to be selected, activities to be carried out under Parts 1 and 2 of the Project ("Sub-project"), in accordance with the eligibility criteria and procedures set out in the Project Implementation Manual.

Sections and Description
Section I.C. of Schedule 2: The Recipient shall ensure that the Project is carried out with due regard to appropriate health, safety, social, and environmental practices and standards, and in accordance with the Safeguards Instruments.

Sections and Description
Section IV of Schedule 2: The Recipient shall appoint, and cause to be appointed, no later than three (3) months after the Effective Date, the following staff in each Regional PCU: (a) one Procurement and Contract Management Specialist, (b) one Mobile Procurement and Contract Management Specialist, and (c) one Monitoring and Evaluation Specialist, all with qualifications, experience and terms of reference satisfactory to the Association.

Conditions

Type	Description
Effectiveness	Article IV. 4.01 (a): The Recipient has the following staff in place within the PCU with qualifications, experience and terms of reference satisfactory to the Association: a Project Coordinator, Senior Financial Management Specialist, two Procurement and Contract Management Specialists, a Senior Monitoring and Evaluation Specialist, and a Database Manager.
Effectiveness	Article IV. 4.01 (b): The Co-financing Agreement has been executed and delivered, and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Financing Agreement) have been fulfilled.

ETHIOPIA
ETHIOPIA RESILIENT LANDSCAPES AND LIVELIHOODS PROJECT

TABLE OF CONTENTS

I. STRATEGIC CONTEXT

A. Country Context

1. Ethiopia is a large, land-locked, and diverse country. Located in the Horn of Africa, Ethiopia covers an area of 1.1 million km^2 - about the size of France and Spain combined. With an estimated population of about 100 million in 2015, out of which 80.5 percent are rural dwellers, Ethiopia is the second most populous country in Sub-Saharan Africa. The country is a land of diverse nationalities and peoples, and its biophysical environment includes a variety of ecosystems, with significant differences in climate, soil properties, vegetation types, agriculture potential, biodiversity, and water resources. The natural resource base remains the foundation for most livelihoods and is subject to considerable environmental and climate risks. Despite past progress, a historic legacy of underinvestment still bears its mark as more than half of the adult population is illiterate, and the country's infrastructure deficit remains one of the largest in the world. Ethiopia is undergoing a faster demographic transition than the rest of Africa, with a rapidly rising working-age population that presents both opportunities and challenges (more than 60 percent of the population is below 25 years of age).

2. Ethiopia is one of the world's poorest countries but has achieved substantial progress in economic, social, and human development over the past decade. With a per capita income of US$660 (2016), Ethiopia remains the 15th poorest country in the world. Nonetheless, growth averaged nearly 11 percent per year since 2004 and extreme poverty[1] fell from 55 percent in 2000 to 26.7 percent in 2016, which is one of the most impressive poverty reduction results recorded internationally (within Sub-Saharan Africa, only Uganda reduced poverty faster). Low levels of inequality have largely been maintained. With a few exceptions, Ethiopia attained the Millennium Development Goals. Yet vulnerability to return to poverty remains high, especially for those engaged in rural livelihoods depending on rain-fed agriculture. Addressing gender gaps between men and women in access to education and decision making, rights, employment, unpaid labor, land, and productive resources is essential for economic growth in the country. World Bank (2009)[2] estimates indicate that reducing basic gender inequalities in education and the labor market could increase the annual Gross Domestic Product (GDP) growth in Ethiopia by around 1.9 percentage points.[3]

3. The Government of Ethiopia (GoE) has embarked on a structural transformation of the economy and society. The GoE has completed its first phase of the Growth and Transformation Plan (GTP-I) (2010–2015), which set a long-term goal for Ethiopia to become a middle-income country by 2025, with a growth rate of at least 11 percent per year during the plan period. During 2011–2015, Ethiopia grew at a rate of 10 percent. A second phase of the GTP (GTP-II) is under implementation for 2015–2020. GTP-II puts a strong emphasis on structural transformation, industrialization, urbanization, and export promotion. Public infrastructure investment has been at the center of the country's economic strategy, and Ethiopia has been able to achieve a substantial expansion of energy, road, railway, and telecom infrastructure, financed by domestic and external public borrowing. Recent announcements indicate the GoE's renewed

[1] Extreme poverty in measured as consuming less than US$1.90 (2011 Purchasing Power Parity) a day.
[2] Unleashing the Potential of Ethiopian Women Trends and Options for Economic Empowerment, June 2009.
[3] An important contribution to poverty reduction given the elasticity of growth to poverty reduction.

commitment to improving the private sector investment climate.[4] Public investments in basic service provision, such as education and health, have contributed to poverty reduction, as did the introduction of rural safety nets. GTP-II continues the Government's commitment that women and youth benefit from and participate in the overall economic, political, and decision-making processes in Ethiopia.

4. GTP-II priorities for natural resource management build on the commitments contained in the Climate-Resilient Green Economy (CRGE) Strategy launched by the GoE in 2011, which seeks to foster economic development and growth, reduce greenhouse gas emissions, and improve resilience to climate change. Within the framework of the CRGE Strategy, GTP-II goals for natural resource conservation and use include targets for the rehabilitation and sustainable management of watersheds[5], the conservation of biodiversity, and expanded provision of land use certificates, as well as the development of climate-resilient agriculture, including promotion of climate-resilient crop species.

B. Sectoral and Institutional Context

5. The intersection of land management, rights, and use forms the key development issue for millions of rural Ethiopians facing water insecurity, food insecurity, land tenure insecurity, and livelihood insecurity – all amplified by climate variability and change. Climate impacts in Ethiopia are felt primarily through water stress, which is affected by land use changes and degradation that undermine watershed function. The minimum estimated annual cost of land degradation in Ethiopia is 2-3 percent of Agricultural GDP, before accounting for downstream affects such as increased flood risk.[6] While a onetime occurrence of such a loss might be manageable, for an economy based on agriculture the cumulative losses to land degradation over time represent a significant drag on rural growth and poverty reduction. Successful remediation has been achieved through a combination of better natural resource management and resource rights, jobs and livelihood enhancements, and gender outreach in targeted degraded watersheds. Restoration effects include a range of resilience-related results, including increased soil moisture and soil fertility important for higher and less variable crop yields, improved water availability, and increased carbon sequestration – all of which are priorities under GTP-II and the CRGE Strategy.

6. This progress has been achieved by the Government and local communities largely through investment and technical assistance under the MoALR's Sustainable Land Management (SLM) Program. Working through Regional Bureaus of Agriculture (BoAs) and woreda (equivalent to district) administrations over the last ten years, the SLM Program has restored productivity in more than two million hectares of degraded watersheds in six regional states of the Ethiopian highlands. The World Bank has provided financing for the SLM Program through the first Sustainable Land Management Project (SLMP-I, 2008-2013) and the subsequent SLMP-II (2013-2018), that together with financing from other Development Partners[7] has allowed the SLM Program to support interventions in a total of 223 major watersheds, out of an estimated 700 that would benefit from SLM interventions.[8]

[4] in 2017, Ethiopia's 'Doing Business' ranking was 159.
[5] A watershed may be defined as the maximum area from which all water drains to a common outlet.
[6] World Bank. 2007. The Cost of Land Degradation in Ethiopia: A Review of Past Studies.
[7] Key Development Partners providing financial support and technical assistance to the Government's SLM Program include the Governments of Norway, Germany and Canada, the European Union, and the International Fund for Agricultural Development.
[8] Major watersheds under the SLM Program cover approximately 10,000 hectares each.

7. IDA financing has helped restore productive capacity and build resilient livelihoods in 135 highland watersheds through an integrated package of activities that includes management of natural resources on more than half a million hectares of degraded communal and smallholder lands. Through soil and water conservation structures, enclosures to limit free grazing, and afforestation or reforestation of more than 80,000 hectares, these activities have led to an average 9 percent increase in vegetation cover in treated watersheds. Complementing these physical interventions, IDA financing for the SLM Program has strengthened MoALR's support for land rights through the issuance of landholding certificates to over 300,000 households, including more than 200,00 women who have received titles either individually or jointly with their husbands, and more than 7,000 landless youth who have received titles to communal holdings in exchange for restoring land. To further ensure that local communities derive livelihood benefits from these investments, more than 130,000 smallholders in the targeted watersheds have participated in income-generating activities under the SLM Program, including for improved cookstove adoption that reduces fuelwood demand, women's labor and respiratory illnesses.

C. Higher Level Objectives to which the Project Contributes

8. The Resilient Landscapes and Livelihoods Project (RLLP) features in the Bank's Country Partnership Framework (CPF) for FY 17-21 as a government flagship program addressing the CPF's resilience pillar, with a funding commitment from IDA-18 of US$100 million. It will leverage and scale up support to the MoALR's SLM Program while also contributing to the climate, forest, water, energy, and land tenure targets in the GTP-II and CRGE Strategy, as well as the forthcoming GTP-III. The targets for natural resource management set out in GTP-II include an additional 19 million hectares to be treated with physical soil and water conservation structures, an increase in national forest coverage from 15 to 20 percent, and the provision of land use certificates to more than 7 million households. To help meet these goals, and to bring the benefits of the Government's SLM Program to further rural communities affected by land degradation, the RLLP will scale up the successes of the SLM Program, and complement these achievements with innovations aimed at sustaining project benefits.

9. In addition to the GTP-II and the CRGE Strategy, this transformative approach will contribute to a number of other national strategies, including Ethiopia's Intended Nationally Determined Contribution (INDC, submitted to the UNFCCC in 2017)[9], the Climate Resilience Strategy for Agriculture and Forestry (2015)[10], the National Adaptation Plan to Address Climate Change (2017)[11], the SLM Investment Framework[12], the emerging National Forest Sector Strategy and National REDD+ Strategy[13], as well as the sector strategies for energy, water, and agriculture. This will complement financing from the Pilot Program for Climate Resilience and the BioCarbon Fund, with which the Bank is further supporting the government's CRGE Facility and four line ministries led by the Ministry of Finance and Economic Cooperation (MoFEC), to implement a Multi-Sector Investment Plan for climate resilience in key sectors, including agriculture, forestry, water resources, and energy.

[9] http://www4.unfccc.int/ndcregistry/PublishedDocuments/Ethiopia%20First/INDC-Ethiopia-100615.pdf
[10] http://www.agcrge.info/files/Vision/CRGE.pdf
[11] https://www.slideshare.net/NAP_Global_Network/strategic-priorities-of-ethiopias-national-adaptation-plan
[12] Ethiopian Strategic Investment Framework for Sustainable Land Management, USAID 2010
[13] REDD+ stands for countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks. See https://ethiopiareddplus.gov.et/redd-readiness/redd-national-strategy/

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

10. The Project Development Objective (PDO) is to improve climate resilience, land productivity and carbon storage, and increase access to diversified livelihood activities in selected rural watersheds.

B. Project Beneficiaries

11. The primary beneficiaries of the RLLP will be 645,000 rural households (approximately 3.2 million individuals) on degraded land, facing land tenure and water insecurity in 152 selected watersheds. Indirect beneficiaries include: (i) communities adjacent to project intervention areas adopting SLM and Climate Smart Agriculture (CSA) practices through demonstration effects, as observed under SLMP-II; (ii) private sector participants and end-consumers in value chains targeted by the project; (iii) households outside project areas benefiting from the creation of land certification capacity at woreda and regional level; (iv) recipients of capacity building at all levels of government, as well as in national partner organizations; and (v) communities outside project areas benefiting from groundwater recharge, reduced flooding, and lower sediment loads, as a result of SLM interventions.

12. Women will be specifically targeted to ensure they fully participate in project benefits through a variety of mechanisms, including: (i) required participation of women in Community Watershed Teams (CWTs), Kebele Watershed Teams (KWTs), Kebele Land Administration and Use Committees (KLAUCs), and Watershed User Associations (WUAs); (ii) provision of joint land certificates to married couples, and individual land titles for women in Female-Headed Households; (iii) promotion of women's participation in Common-Interest Groups (CIGs – see Annex 1 for details) for income-generating activities; and (iv) targeted support for the production and marketing of improved cookstoves, bringing health gains and time-savings that benefit women in particular.

C. PDO-Level Results Indicators

13. The PDO-level results indicators for the RLLP are as follows:

1. Land area under sustainable landscape management practices (Ha)
   1a. Land area restored or reforested/afforested (Ha)
   1b. Land area with productivity enhancing practices applied (Ha)
2. Project area showing an increase in the NDVI[14] correcting for climate effects (Percent)
3. Project area showing an increase in the Land Surface Water Index (LSWI)[15] correcting for climate effects (Percent)
4. Net greenhouse gas emissions (metric tons)

[14] The NDVI uses the visible and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the extent to which a target contains live green vegetation.
[15] The Land Surface Water Index (LSWI) uses the shortwave infrared and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements to determine the amount of water in vegetation and soil.

5. Households adopting diversified livelihood activities supported by the project (Number)

5a. Female-headed households adopting diversified livelihood activities supported by the project (Number)

14. Building resilience is a central consideration under RLLP, but is a term that is often loosely interpreted. In general, "resilience" refers to a heightened system capacity to anticipate, respond to, and recover from hazards. Resilience-building involves strengthening three specific capacities:

- **Absorptive capacity**: The ability of people, assets, and systems to prepare for, mitigate, or prevent negative impacts of hazards so as to preserve and restore essential basic structures and functions, for example through protection, robustness, preparedness, and/or recovery.
- **Adaptive capacity:** The ability of people, assets, and systems to adjust, modify or change characteristics and actions to moderate potential future impacts from hazards so as to continue to function without major qualitative changes, for example through diversity, redundancy, integration, connectedness, and/or flexibility.
- **Transformative capacity:** The ability to create a fundamentally new system so as to avoid negative impacts from hazards.

15. The RLLP seek to strengthen these capacities in a number of ways, including: (i) absorptive capacity, through SLM and CSA interventions, which will be assessed through PDO indicators 1, 1a and 1b; (ii) adaptive capacity, through Income-Generating Activities (IGAs) that support diversification of livelihoods, assessed through PDO indicators 5 and 5a; and (iii) transformative capacity, through CSA, connections to value chains, and land certification, that provide a basis for more fundamental socio-economic change, which will be assessed through PDO indicators 1b, 5 and 5a, and monitored through Intermediate Results indicators IR 6, 6a and 10. The Results Framework provides additional details of how each indicator will be measured to capture progress in these various dimensions.

III. PROJECT DESCRIPTION

A. Project Components

16. Building on lessons learnt through implementation of the SLM Program, the RLLP will complement core investments in biophysical watershed restoration with a set of associated activities supporting sustainable livelihoods in restored landscapes[16], through support for CSA, diversified IGAs, connections to value chains, and improved land tenure. The project area will include a total of 152 major watersheds located in the Ethiopian Highlands, averaging approximately 10,000 hectares each. Under a phased approach, the 45 watersheds supported under SLMP-I will receive assistance to graduate from project-based support, including creation of WUAs and preparation of Watershed Management and Use Plans (WMUPs). Support for the 90 SLMP-II watersheds will allow implementation of their Multi-Year Development Plans (MYDPs) for watershed restoration to be completed, prior to provision of graduation

[16] A landscape is a socio-ecological system, including topography, natural resources, biodiversity and various land uses, that is influenced by climate and culture, as well as ecological process and human activity. A landscape approach refers to the integrated management of community, conservation and commercial interests, representing a shift from a sectoral to a collaborative approach that sustains the functionality of the landscape over time.

support as for SLMP-I watersheds. Seventeen new watersheds selected for RLLP, prioritized for extent and severity of land degradation[17], will receive assistance for the preparation of MYDPs, followed by investment in the identified SLM interventions.

17. This phased approach will help clarify and strengthen linkages with other flagship programs of the MoALR, including the Productive Safety Net Program (PSNP) and the Agricultural Growth Program (AGP), which are both supported by the World Bank (P120957 and P148591, respectively). A number of communities graduating from food-insecure status in watersheds newly identified for RLLP will transition from support under PSNP to the SLM Program. The PSNP includes support for food-insecure households in the form of employment in public works, including SLM activities. As these communities transition out of food-insecure status, those that are living in targeted degraded watersheds will become eligible to participate in SLM, livelihood and other activities, according to the conditions of the SLM Program. At the other end of the SLM project cycle, communities in watersheds restored under SLMP-I and SLMP-II will graduate from the SLM Program, but will receive support for sustainable agricultural productivity under AGP and other government programs.

18. The RLLP will be implemented through four integrated components, as summarized below and detailed in Annex 1.

Component 1. Green Infrastructure and Resilient Livelihoods (Total: US$78.5 million of which US$65 million (SDR45.9 million equivalent) from IDA, US$8.5 million from the Multi-Donor Trust Fund - MDTF; and US$5 million from GoE)

19. This component will support the restoration of degraded landscapes in selected watersheds and help build resilient livelihoods on this newly productive foundation. This will be achieved through three sub-components, supporting: (i) the implementation of Sustainable Land and Water Management (SLWM) practices in line with MYDPs in 90 SLMP-II watersheds and 17 newly identified watersheds; (ii) the adoption of CSA practices in 200 restored micro-watersheds selected from SLMP-I and SLMP-II intervention watersheds; and (iii) the promotion of livelihood-diversifying IGAs in all RLLP watersheds, and support in 16 pilot watersheds for linkages to value chains. While the Government of Norway has provided a letter of commitment for the MDTF resources indicated above, there remains a low risk that this co-financing may not be agreed. In this case, the number of new watersheds selected for SLWM interventions would be reduced from 17 to 14, and the target values to be achieved against PDO-level results indicators 1, 1a and 4 would be reduced by 2 percent, 1 percent and 3 percent respectively. The total financing for this component would then be adjusted to US$71 million, of which US$66 million from IDA (SDR46.6 million equivalent), and US$5 million from GoE (see Section III.B, Project Costs and Financing)

20. This component will complete the implementation of SLWM interventions identified in the MYDPs of 90 SLMP-II watersheds, and extend these proven interventions to 17 additional watersheds that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. SLWM interventions on both communal and individual lands will be financed (with differentiated levels of community contribution), as well as infrastructure such as green corridors linking fragmented forests, and

[17] This prioritization was undertaken by the Federal PCU, using data provided by the WLRC of Addis Ababa University.

community access roads designed to optimize water-harvesting, together with the necessary technical advice for specific outputs, such as the preparation of MYDPs and WMUPs, and the establishment of WUAs. Proven SLWM practices include: (i) soil and water conservation infrastructure such as terraces, water harvesting trenches, check dams, small reservoirs and wells, and other civil works; (ii) soil fertility and moisture management; and (iii) assisted natural regeneration, vegetative gully reclamation, enclosures plus livestock land-use rationalization, establishment of grazing corridors, as well as intercropping, low tillage, and sylvo-pastoral management strategies.

21. Building on the biophysical landscape restoration achieved through SLWM practices, this component will extend the ongoing CSA pilot under SLMP-II to a further 200 micro watersheds, providing support for activity packages that address: (i) farm water and soil moisture management; (ii) integrated soil fertility and soil heath management; (iii) crop development and management; and (iv) sustainable livestock production, through feed development and integrated agro-silvo-pastoral practices. To strengthen community resilience through livelihood diversification, this component will extend the support for IGAs provided under SLMP-II to all RLLP watersheds, providing grants to CIGs for activities such as apiculture, poultry rearing, sheep and goat fattening, vegetable and fruit farming, and the production and marketing of improved cook stoves which help reduce pressure on watersheds' natural resources. The RLLP will further promote CSA and livelihood diversification through stronger engagement with the private sector, providing support in 16 pilot watersheds for value chain connections in the form of: (i) business plan development; (ii) storage facilities and small equipment for grading and processing; (iii) collaboration with other value chain programs to facilitate market linkages; and (iv) development of contracts with cooperatives, cooperative unions and other private sector partners.

Component 2. Investing in Institutions and Information for Resilience (Total: US$12.5 million of which US$6 million (SDR4.2 million equivalent) from IDA, and US$6.5 million from MDTF)

22. This component will build capacity for the promotion and management of SLWM practices, and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area. This will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development; (ii) impact evaluation, knowledge management and communication. Should the MDTF co-financing from the Government of Norway not be agreed, the composition of financing for this component would be adjusted to US$12.5 million from IDA (SDR8.8 million equivalent - see Section III.B, Project Costs and Financing)

23. This component will provide technical assistance at the local level to build local government capacity for planning and implementing SLWM interventions. This will include support for: (i) Community Facilitators (CFs) at kebele level; (ii) accountants to support Woreda Offices of Agriculture and Natural Resources (WoANRs); and (iii) targeted assistance for specific technical needs, such as community monitoring of surface and groundwater, piloting access to agri-weather information, and training in cadaster development and land registration. The project will also pilot new technologies for information modernization at the local level, including electronic tablets for gathering geospatial information, and Unmanned Aerial Vehicles (UAVs – or drones) for land certification mapping. Support for policy development under this component will focus on: (i) the development and application of a regulatory framework for WUAs; (ii) agreements with private and public-sector entities for investment in SLWM through Payments for Environmental Services (PES); and (iii) strengthening the land administration

system.

24. To build the evidence base for SLM decision-making, this component will support (i) a bio-physical impact evaluation of SLWM interventions at the landscape level, to be conducted through a partnership between the MoALR and the Water and Land Resource Centre (WLRC) of Addis Ababa University, and (ii) a plot-level evaluation of the impact of CSA on agricultural productivity, through a partnership between MoALR and CGIAR institutions. These will complement a household-level livelihoods impact evaluation to be conducted in parallel (under separate financing), led by the Gender Innovation Lab of the World Bank's Africa Region. The livelihoods impact evaluation will consider gender-nuanced household outcomes, such as land-use decision making, investments in land and livelihood diversification, as well as employment and earnings outcomes. The Ethiopia Development Research Institute's (EDRI's) Environment and Climate Research Center will build synergies between and draw policy recommendations from the three levels of analysis. This component will also provide resources to share the experiences and manage the knowledge generated by the project, as well as to communicate lessons learnt to a broad audience.

Component 3. Rural Land Administration and Use (Total: US$23 million of which US$20 million (SDR14.1 million equivalent) from IDA, and US$3 million from MDTF)

25. This component will strengthen the rural land administration system that secures tenure rights, optimizes land use, and empowers land-users to sustainably invest in productive landscapes. The component will provide security of tenure to smallholder farmers in RLLP watersheds through Second Level Landholding Certification[18] (SLLC) as an incentive to increase the adoption of SLM technologies and practices, and will provide targeted landless youth with communal land certificates in exchange for land restoration. Half of the SLLC and communal certificate title-holders will be women. This component will also extend the on-going local-level participatory land-use planning exercise at kebele level within RLLP watersheds, and will support the rollout of the National Rural Land Administration Information System (NRLAIS) in RLLP woredas.

26. Should the MDTF co-financing from the Government of Norway not be agreed, the number of SLLCs and communal land certificates to be issued would be reduced, as would the number of locations in which support is provided for land-use planning and the rollout of the NRLAIS. However, these changes would not affect the target values of the PDO-level results indicators. In this case, the total financing for this component would be adjusted to US$11.5 million from IDA (SDR8.1 million equivalent - see Section III.B, Project Costs and Financing).

Component 4. Project Management and Reporting (Total: US$15 million of which US$9 million (SDR6.4 million equivalent) from IDA, US$1 million from MDTF, and US$5 million from GoE)

27. This component will ensure effective implementation and reporting on project activities with due

[18] In the late 1990's the GoE embarked on an ambitious program to document and register lands held by rural households. This "first-level" land certification program was designed to increase tenure security, but did not map individual plots. To address these limitations, rural SLLC was first piloted in 2005 under the terms of the Federal Land Administration and Use Proclamation No. 456/2005, providing additional spatial data allowing for the development of cadastral maps for improved land use management and administration.

diligence and integrity. The component will finance the operational costs of the PCUs in MoALR and Regional State Bureaus of Agriculture and Natural Resources. These PCUs will carry out all fiduciary aspects of project implementation including financial management, procurement, environmental and social safeguards, as well as Monitoring and Evaluation (M&E) and reporting. Should the MDTF co-financing from the Government of Norway not be agreed, the composition of financing for this component would be adjusted to US$10 million from IDA (SDR7.1 million equivalent) and US$5 million from GoE (see Section III.B, Project Costs and Financing).

B. Project Cost and Financing

Project Components	Project cost (US$m)	IDA Financing (US$m)	Trust Funds (US$m)	Counterpart Funding
Component 1. Investment in Green Infrastructure and Resilient Livelihoods	**78.5**	65	8.5	5
Component 2. Investing in Institutions, Information and Monitoring for Resilience	**12.5**	6	6.5	-
Component 3. Rural Land administration and Use	**23**	20	3	-
Component 4. Project Management and Reporting	**15**	9	1	5
Total Project Costs	**129**	**100**	**19**	**10**

28. The indicated Trust Fund financing would be provided by the Government of Norway through a MDTF. The Government of Norway has provided the Bank with a letter of commitment indicating the intent of the Norwegian Ministry of Foreign Affairs to support the RLLP, subject to the project's approval by the World Bank Board, Norway's assessment of the Project Appraisal Document, and a satisfactory outcome of the negotiation of the Administration Agreement for the MDTF. There remains a low risk that this co-financing may not be agreed however, in which case project financing will be adjusted as shown below.

Project Costs and Financing should MDTF resources from the Government of Norway not be approved:

Project Components	Project cost (US$m)	IDA Financing (US$m)	Counterpart Funding
Component 1. Investment in Green Infrastructure and Resilient Livelihoods	**71**	66	5
Component 2. Investing in Institutions, Information and Monitoring for Resilience	**12.5**	12.5	-
Component 3. Rural Land administration and Use	**11.5**	11.5	-
Component 4. Project Management and Reporting	**15**	10	5
Total Project Costs	**110**	**100**	**10**

C. Lessons Learned and Reflected in the Project Design

29. Results from SLMP-II financing are well documented.[19] During a major drought in 2015-16 there is evidence that water and food security in participating districts were strengthened compared to untreated areas. Degraded lands have been brought back into production for local farmers, dry season base flow of streams and depth to water table are improving, and protective vegetation cover was either maintained or expanded, as verified by remote sensing. In addition, approximately 9 million tons of additional CO2e have been accumulated in restored productive lands in SLMP-II areas. Smallholder farmers regularly express how their identity and sense of place has also been restored through landscape restoration and improved legal land rights. Many community members who were ready to migrate remained in their birthplace, and were able to afford to send their children to school. They were able to improve nutrition by producing vegetables and fruits using small-scale irrigation, by diversifying through poultry, apiculture and woodlot production, and by improving livestock productivity through forage management.

30. A strategic lesson reflected in the design of RLLP is the need to provide a mechanism and supporting elements to allow watersheds to graduate from project-based assistance and continue sustainable management of restored landscapes through normal government mechanisms. Under RLLP, support will be provided to extend experience from the Amhara Region with the creation of WUAs, as legal entities capable of sustaining participatory watershed management when project-based support ends. RLLP will also prepare watersheds for graduation through (i) building local government capacity to design and manage SLWM interventions, (ii) strengthening incentives for investment in sustainable land management through land certification, and (iii) improving returns to sustainable productive activities by promoting CSA and forging connections to value chains. The latest technical lessons are being captured in an update of MoALR's Community-Based Watershed Development Guidelines which will serve as the principal technical guidance document for SLM interventions under RLLP. Two broad technical lessons are: (i) area closures to limit free grazing for erosion control should be complemented by fodder production to better support enclosed livestock management practices; and (ii) support for CSA and linkages to value chains reinforce incentives for the maintenance of SLWM investments. Lessons regarding SLM Program implementation include the importance of: (i) aligning project budgeting systems with the GoE budget calendar; (ii) including the costs of environmental mitigation measures in subproject designs; and (iii) resources to upgrade monitoring and evaluation.

31. Lessons can also be drawn from comparable operations in other countries. In Rwanda, the *Land Husbandry, Water Harvesting and Hillside Irrigation Project*, has demonstrated the value of combining support for SLM with CSA and the development of market linkages. The *Karnataka Watershed Project* in India, has already won awards in the development of an integrated data base (Land Resource Inventory). As a result of the demonstrated value of this tool to inform evidence-based project investments, this is now being scaled up to cover all districts. In Nigeria, the *Erosion and Watershed Management Project* has demonstrated the importance of addressing gully erosion as part of a larger catchment management plan, including investments in soil and water conservation both at gully sites and upstream to reduce further erosion, and pioneering the use of vegetative interventions (bio-engineering) as part of the solution. In Malawi, the *Shire River Basin Management Project* is piloting innovative approaches for integrated

[19] A video of the SLMP-II approach and achievements is available at *https://www.youtube.com/watch?v=nak-UUZnvPI&t=1s*

watershed management, and has demonstrated the value of starting planning at a landscape level to identify strategic areas for investments, and then planning at smaller scales in more detail for concrete action plans that villagers can implement.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

32. Implementation will be carried out by the MoALR through all five levels of government (federal, regional, zonal, woreda (equivalent to district) and kebele (equivalent to sub-district)), using the government's existing robust implementation structure for the SLM Program. This will be reinforced through signature of an MoU between the MoALR and regional governments clarifying accountability and targets at all levels. While these entities and their staff are well prepared to implement RLLP in the 135 woredas of SLMP-I (P107139) and SLMP-II (P133133), implementation in the 17 new woredas identified for RLLP will require a start-up period of capacity building and community mobilization. Project management, financial management, and procurement are all currently rated satisfactory or moderately satisfactory under the ongoing SLMP-II.

33. At the local level, implementation of MYDPs is undertaken by Community CWTs, KWTs, and the Woreda SLM core team. Together with part-time Community Facilitators (CFs), and full-time kebele Development Agents (DAs), these structures will: (i) facilitate community participation in preparation and implementation of MYDPs; (ii) develop annual work plans and budgets; (iii) identify training needs; and (iv) conduct monitoring and evaluation. Implementation of Component 3 will be undertaken jointly by the Woreda Office of Land Administration and Use (WoLAU), the KLAUC, and the Land Administration and Use DAs. In addition, the project will contract technical advisors for specific outputs, such as preparation of MYDPs and WMUPs, establishment of WUAs, support to CSA adoption, and development of business plans for IGAs and value chain linkages.

34. At the federal and regional levels, the SLM Program is guided by National and Regional SLM Steering and Technical Committees. MoUs will be signed between MoALR and the Regional BoAs for implementation of the project, defining each Region's contribution to the project's objectives. The National and Regional Steering Committees will oversee execution of annual work plans and achievement of results defined in the MoUs. At the regional level, the Regional BoAs will lead implementation of the project, reviewing and consolidating annual work plans, budgets, procurement plans and progress reports submitted by the participating woredas.

B. Results Monitoring and Evaluation

35. MoALR's M&E system under SLMP-II has experienced implementation challenges. Learning from this experience, for the new operation, MoALR will: (i) strengthen M&E at all levels; (ii) build systems and capacity in government to undertake M&E; (iii) support data collection and management for use by the project M&E system; and (iv) continue the partnership with WLRC for the development of a GIS database of biophysical information and SLM Program interventions. As described above, Component 2 will support impact evaluations of SLM and CSA interventions, complementing a livelihoods impact evaluation

to be led by the World Bank.

C. Sustainability

36. MoFEC and MoALR are committed to scaling-up and ensuring the long-term sustainability of the Government's proven flagship SLM Program, for which the World Bank has been the largest financier. In addition to IDA financing, the Government has requested the World Bank to be a Green Climate Fund (GCF) delivery partner to secure additional SLM financing to address the expected climate change increment to land degradation, and to convene financing from a variety of other sources to help achieve transformative impact.

37. The RLLP will place emphasis on support for SLMP-I and SLMP-II watersheds to graduate from project-based assistance and continue management of restored landscapes through mainstream mechanisms. Project-specific watershed committees will transition into WUAs guided by WMUPs, and local governments will receive support to design and manage SLWM interventions. Long-term incentives for SLM will be further strengthened through land certification and value chain linkages for improved returns to sustainable productive activities. RLLP will also seek to identify innovative sources of SLM financing, including PES from either (i) private sources with an interest in restored watersheds, as exemplified by the recent agreement with Raya Brewery-BGI Ethiopia in the Tigray Region[20], or (ii) public sources such as municipalities and River Basin Authorities with an interest in improved catchment management to extend the lifetime and productivity of hydrological infrastructure, including for hydropower, irrigation and water supply.

38. The sustainability of SLWM interventions will also be promoted through the demonstration effect of interventions under RLLP. Informal spill-over effects can be important: for example, CSA pilot watersheds have been visited by farmers and extension workers from adjacent areas and replicated through the government extension system. More formally, the biophysical, CSA and livelihoods impact evaluations of RLLP will provide robust evidence to justify continued investment in SLM and CSA. The introduction of new technologies provides an additional mechanism for sustainability, for example the development of guidelines for community roads to also serve as water harvesting structures, and pilot activities building on evidence of higher drought tolerance of landrace varieties of wheat and barley.

D. Role of Partners

39. SLMP-II benefitted from parallel financing from the German Development Agency *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) for Cluster Advisors who supported extension, technical planning, and results reporting at woreda and kebele levels. The new GIZ program launched in 2018, Sustainable Use of Resources for Economic Development (SURED), will play an important role in providing training for technical assistance to be contracted under RLLP, as well as quality control of these services. RLLP will also be coordinated with parallel financing to the SLM Program provided by the Government of Germany through KfW Development Bank, as well as financing for rural land administration and certification from a variety of sources, notably the Department for International

[20] On May 13, 2018, Raya Brewery-BGI Ethiopia signed an MoU with the Tigray Bureau of Agriculture and Natural Resources, Enda-Mekhoni Woreda, Mekan Kebele, and Mekelle University, for investment in SLM activities to protect the catchment area of the water-source for the brewery.

Development (DFID) of the United Kingdom (Land Investment for Transformation - LIFT), the Government of Finland (Responsible and Innovative Land Administration - REILA), and the Government of Germany (for land use planning).

40. IDA resources provided through RLLP will be blended with grants from bilateral agencies through a MDTF. The Government of Norway has committed to extend the same level of support it provided to SLMP-II through a contribution to the MDTF for RLLP, and the Government of Canada has also expressed interest in contributing. While the Government of Norway has provided a letter of commitment for the Trust Fund resources indicated, there remains a low risk that this co-financing may not be agreed. In this case it would be necessary to: (i) reduce the number of new watersheds selected for SLWM interventions from 17 to 14, and correspondingly reduce the target values to be achieved against PDO-level results indicators 1, 1a and 4 by 2 percent, 1 percent and 3 percent, respectively; and (ii) reduce the number of SLLCs and communal land certificates to be issued, as well as the number of locations in which support is provided for land-use planning and the rollout of the NRLAIS, although these changes would not affect the target values of the PDO-level results indicators.

41. At the Government of Ethiopia's request, the World Bank is preparing proposals for additional financing to RLLP from (i) the GCF, with a proposal submitted for consideration by the GCF Board meeting to be held in October 2018, and (ii) the Global Environment Facility (GEF), to be financed from Ethiopia's GEF-7 allocation.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

42. **The overall risk to achieving the development objective is Substantial.** The individual risks rated substantial or high are listed below, along with the main mitigation actions during implementation.

43. **Political and governance risk is rated Substantial.** On June 5, 2018, the House of People's Representatives approved the lifting of the State of Emergency which had been re-instated in February 2018. Although the situation has stabilized since the nomination of a new Prime Minister in April 2018, there remains a risk that implementation of the proposed operation could be negatively impacted should civil disturbances recur. While the extent to which project-specific measures can mitigate this risk is limited, the RLLP will adopt the approach of other Bank-financed operations, including: (i) careful implementation support mission planning that emphasizes security; (ii) strategic communication and outreach; (iii) sound safeguards monitoring building on SLMP-II experience and capacity; and (iv) enhanced transparency in project-supported activities. RLLP will also contribute to alleviating some of the drivers of civil unrest, including natural resource degradation, rural landlessness and joblessness.

44. **Institutional capacity for implementation and sustainability risk is Substantial**, due to a number of issues including: (i) the restructuring of the GIZ program supporting the SLM Program, reducing the number of Cluster Advisors available for field coaching at the local level; (ii) the limited human resources available at the field level; (iii) the challenge of implementing a reliable and cost-effective M&E system; and (v) weak coordination among institutions and programs, including between the Natural Resource Management (NRM) Directorate of MoALR and the PCU. This set of risks will be mitigated through: (i)

continual training on project management and monitoring at all levels, in coordination with the GIZ SURED project; (ii) signature of an MoU between the MoALR and Regional BoAs clarifying accountability and targets at all levels; and (iii) coordination between development partners through the Rural Economic Development and Food Security platform of the MoALR, and its Technical Committee on SLM.

45. **Fiduciary risk is rated Substantial** due to persistent issues related to procurement and financial management. Although SLMP-II has only had "unqualified" audits to date, weaknesses noted at regional and woreda levels include non-compliance with payment approval arrangements, use of manual accounting systems, insufficient procurement specialists and inadequate procurement capacity building, lack of internal audit oversight, and high turnover of project fiduciary staff. Mitigation measures to address these concerns will include deployment of accountants and use of computerized accounting systems at woreda level, engagement of procurement specialists and provision of procurement training at regional level, regular risk-based audits at woreda level by federal and regional auditors, and the recent increase and harmonization of salaries by MoFEC for project procurement and financial management staff.

46. **Stakeholder risk is rated Substantial** because of: (i) potential for re-emergence of civil unrest, (ii) weak multi-sectoral coordination, (iii) risk of potential elite capture of project benefits, and (iv) possible inaccurate perceptions of association with either the Government's Commune Development Program (CDP), which resettles communities to crowd-in public services, or the Mass Mobilization Campaign, neither of which the Bank finances. A technical visit carried out in 2016 to assess the findings of the Alignment of Operations Screening Checklist[21] submitted by the Federal PCU found that some SLMP-II sites overlapped spatially, but not temporally, with the CDP sites. In addition to the Grievance Redress Mechanism (GRM – see below), to mitigate these risks the project will implement communication measures to inform local communities, strengthen participatory development, and enhance transparency. To mitigate risks related to the CDP, woreda staff will be trained in the application of the Alignment of Operations Screening checklist, which requires screening for interface with the CDP if it is implemented in RLPL watersheds. To mitigate risks related to the Mass Mobilization Campaign, spatial separation will be pursued and documented.

47. **Other risks.** Drought presents a moderate risk to project implementation, as drought (and climate change related impacts in general) affects or limits growth of tree and shrub seedlings planted, particularly in moisture-deficit areas. As a result, project results related to afforestation and reforestation might not be achieved. Similarly, due to unexpectedly high rainfall intensity some built structures such as terraces may be destroyed, and crop land may be flooded. The mitigation measure is embedded in the technical design of the project itself, which aims to reduce drought and climate change impacts, as SLMP-II has demonstrated. Additional effort will be placed on enhancing the resilience of built green infrastructure such as terraces by updating the specifications in the government's program-wide manual, the Community-Based Participatory Watershed Management Guidelines. While the Government of Norway has provided a letter of commitment for the Trust Fund resources indicated above, there remains a low

[21] It was agreed in 2015 with MoFEC that: (i) no WB funded projects will knowingly be implemented in the GoE's CDP sites, and (ii) that any geographic overlaps with Bank-financed operations will be subject to the Alignment of Operations (AOP) checklist to screen for availability of basic services provided by the CDP. The objective of the AOP checklist is to help the WB Task Teams proactively manage the operational interface between the GoE's CDP and Bank-financed projects or sub-projects in, or near the CDP sites. It will also enable Bank Task Teams to demonstrate that, they have taken all reasonable steps to avoid getting involved with CDP sites particularly non-viable or seriously deficient CDP activities.

risk that this co-financing may not be agreed, in which case it would be necessary to (i) reduce the number of new watersheds selected for SLWM interventions from 17 to 14, and reduce the associated target values to be achieved against PDO-level results indicators 1, 1a and 4 by 2 percent, 1 percent and 3 percent respectively, and (ii) reduce the number of SLLCs and communal land certificates to be issued, as well as the number of locations in which support is provided for land-use planning and the rollout of the NRLAIS, although these changes would not affect the target values of the PDO-level results indicators.

VI. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

48. To assess the ex-ante efficiency of the project investment, a cost benefit model is used. Annual cost and benefit flows are estimated as the difference between without-project and with-project net benefits for direct beneficiaries (See Annex 4: Economic and Financial Analysis for more details). It is expected that without the project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production for their livelihood. Production yields will go down or farmers will have to increase their input costs to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses, and fail to capture higher crop prices that are obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the project due to soil erosion as well as overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation and hydropower dams.

49. Incremental benefits are estimated for investments in green infrastructure and resilient livelihoods (Component 1). It is assumed that these benefits will only accrue if the activities in the remaining 3 components are also achieved. Project interventions are assumed to lead to direct net benefits to crop and livestock producers as well as forests and other non-croplands through watershed management plans. These activities will reduce soil erosion, improve productivity, reduce yield losses, and increase resilience. The project will encourage new income-generating activities through community groups and linkages to value chains. Project activities will also constitute a net carbon sink.

50. Total investment costs of US$129 million and a US$38 million estimate for beneficiary in-kind contributions are included in the Economic and Financial Analysis (EFA).[22] In the 25-year net benefit analysis using a 5 percent discount rate, the project yields an Economic NPV of US$1,696 million (ETB 47.5 billion) and has a benefit cost ratio of 5.3. The Economic IRR is 60 percent. The payback period is 4.5 years. When excluding the social value of carbon, the net economic project return is US$1,063 million (ETB 30 billion) with a benefit cost ratio of 3.7 and an EIRR of 34 percent and a payback period of 6.7 years. This is

[22] Beneficiary contribution includes US$25 million in-kind contribution to labor costs calculated as 50% on communal land and 80% on private land (equal to 34% of US$ 78 million in Component 1). An additional US$ 13.1 million on top of the US$15 million Component 4 budget is assumed as in-kind contribution from the GoE for staff and office costs of federal and regional governments (the same proportion as assumed in the EFA for SLMP-II).

1.5 percent of Ethiopia's GDP (in 2016 terms). In financial terms the NPV is US$365 million (ETB 10.2 billion) with a Financial IRR of 33 percent, a benefit cost ratio of 2.5 and a payback period of 6.7 years. This estimated net return constitutes 0.5 percent of Ethiopia's GDP in 2016. In the financial analysis, estimated farm-level gross margins can increase by over US$ 106/year/person, which is 1.2 times the Food Poverty Line (US$ 85/person/year in 2018 terms), or 66% of the National Poverty Line (US$ 162/person/year).

51. The rationale for public sector involvement in the SLM Program is based on the public goods nature of the environmental benefits delivered through SLM activities, in the form of groundwater recharge, reduced soil erosion on communal land, reduced sediment loads in surface water runoff, reduced flood risk, and carbon sequestration. Nevertheless, as described above, the project will seek opportunities to promote PES from private and public-sector organizations, where the concentration of benefits derived by such entities makes this feasible. The World Bank brings significant value-added to the SLM Program, based on the wealth of experience and expertise developed through support for SLMP-I and II, as well as SLM initiatives in other countries (see Lessons Learned, above). Given the concessional nature of the financing, the sustainable improvements to natural resource productivity expected as a result of the project will contribute to long-term strengthening of the fiscal situation through economic growth and associated increases in revenue.

52. The RLLP is expected to yield high returns even when considering key risk factors such as: yield and price changes; adoption rates; and project delays. As part of a risk management plan, it is particularly important to ensure that farmers achieve target yields, and can negotiate and obtain fair output prices. The planned plot-level impact evaluation will measure yields achieved with project support, and the planned support for linkages to value chains will seek to improve the prices received by farmers for their production. Part of the risk management plan will also be to ensure that any storage facilities supported by the project as part of linkages to value chains are used to their full capacity to ensure their financial viability. Close project monitoring and support for target communities to implement MYDPs and WMUPs will help ensure that SLM and productivity goals are achieved.

B. Technical

53. The technical design of the proposed RLLP is primarily based on the successful experience of watershed management over the last decade under the GoE's SLM Program. The design of the watershed component draws on the experience and lessons learned from the SLMP-II project, including the CSA pilot conducted in selected watersheds. Supported by detailed existing technical manuals, the proposed RLLP applies a comprehensive intervention strategy, using the micro-watershed as the primary planning and implementation unit, by promoting a set of technically proven demand-driven investments that not only take into consideration environmental challenges and opportunities, but also phases-in a holistic landscape approach, incorporating the productive and livelihood dimensions of the beneficiary households. More specifically, once satisfactory levels of rehabilitation have been achieved through biophysical measures in a micro-watershed, support to on-farm improved climate-smart crop and livestock practices is phased-in, allowing households to adopt technologies that maximize the benefits of environmental interventions and ultimately achieve a sustainable climate-smart landscape.

54. Support for livelihood diversification and connections to value chains under RLLP draws on lessons

from experience under SLMP-II with Self-Help Groups, as well as experience under the Bank-supported AGP-II with CIGs. Where relevant, RLLP will seek to connect beneficiary communities to value chain investments made under AGP-II and other agri-business initiatives. The design of land certification and administration activities to be implemented under RLLP is based on a number of successful projects in Ethiopia, including support provided under SLMP-II, as well as the Government's own land certification initiatives.

55. The project addresses the overall technical and institutional requirements for the effective provision of support services to watershed-level interventions, by providing adequate financing for training, technical assistance and capacity building at the local level, closely coordinated with the provision of technical assistance under GIZ SURED, as well as supporting a comprehensive set of knowledge management and dissemination initiatives.

C. Financial Management

56. The Financial Management (FM) arrangements for the RLLP will be based on the existing FM systems and structures established under SLMP-II. The Federal PCU based at the MoALR will retain the overall fiduciary responsibility for the implementation of the project, Regional PCUs in the six Regional BoA's and the administrations of all the implementing woredas. Project annual budgets will be prepared based on consolidated annual work plans initiated at the woreda and regional levels and compiled at the federal level. See Annex 2 for further details on implementation arrangements.

57. In the Federal PCU, the six regions and all woredas, the project will maintain segregated local currency bank accounts where project funds will be deposited and from which payments will be made. Proceeds of the IDA Credit and MDTF will initially flow into the DA before further disbursement into each of the local currency project accounts based on the approved annual work plan and budget. In addition to receiving advances through the DA, the project may use other disbursement methods such as reimbursements, direct payment and special commitment. To enhance the level of disbursements under the new project, the team will ensure prompt submission of quarterly IFRs immediately after the end of each quarter.

58. A FM assessment of the implementing entities, including sampled woredas, has been conducted by the Bank. The outcome of the assessment was that the FM arrangements maintained by the implementing entities are adequate to provide reasonable assurance over the use of project resources. The FM assessment however, noted some weaknesses including gaps in accounting capacity at the federal and woreda levels mainly due to high turnover of project accountants and weak internal audit oversight at the regional and woreda levels. In addition, there is a need to strengthen controls over community-level labor payments and accountability of advances issued to regions and woredas. As a result, the FM risk rating for the implementation of the RLLP is considered Substantial and specific mitigation measures have been outlined in Annex 2.

D. Procurement

59. Procurement under the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers - 'Procurement in Investment Project Financing, Goods,

Works, Non-Consulting, and Consulting Services', dated July 2016, revised November 2017 and 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', revised as of July 1, 2016, and the provisions stipulated in the Legal Agreement. A Project Procurement Strategy Document (PPSD) has been prepared by the MoALR, which includes a Procurement Plan for the first 18 months of the project life. The PPSD found that the Federal and Regional PCUs have acceptable experience in implementing activities financed by the World Bank, but recommends that the World Bank team conduct training to address lack of familiarity with the new Procurement Framework, and that staffing for procurement in the Federal PCU be reinforced to enhance supervision of Regional PCUs. The PPSD notes that project implementation will be highly decentralized, and recommends that procurement of locally available small goods, supplies and services follow Community-Driven Development (CDD) procedures to be detailed in the PIM, to be finalized within one month of project effectiveness. Given the small size of works contracts to be procured in many dispersed locations, the PPSD recommends that open national competition be preferred for works procurement, as international firms are not expected to participate. The market survey for seed production and supply found that seedlings are rarely produced by the private sector on a commercial scale. Consequently, where competition is not practically possible, the PPSD recommends that force account and direct contracting be applied for supply from government-owned regional Seedling Development Centers and Scientific Research Centers, as well as from small-scale privately-owned nurseries for specialized seed production. The PPSD also determined that participation of government-organized MSEs should not exclude the participation of private non-MSE actors.

60. A procurement capacity assessment revealed that the MoALR and other implementing agencies have adequate experience in implementing procurement activities of Bank financed projects. Nevertheless, a number of shortcomings were observed, including: (i) the number, qualification and experience of procurement and contract management staff was not considered adequate; (ii) high staff turnover due to low payment; (iii) non-compliance to agreed procurement procedures in the previous SLMP-I and II projects; (iv) lack of an independent internal and external procurement audit system; (v) risk of fraud and corruption; (vi) lack of office supplies/equipment, such as computers, office furniture and internet facilities, procurement data management system and procurement record facilities; and (vii) reservation and preferential schemes for MSEs established by public bodies, which reduce the participation of other private firms. Based on the current risk assessment, the procurement risk rating is high.

61. The mitigation measures to be taken to address the shortcomings/risks of the procurement system of the project include: (i) hiring procurement and contract management specialists with the required qualification and experience at all levels; (ii) including clear guidance on procurement procedures in the PIM, to be finalized within one month of project effectiveness, and providing intensive procurement and contract management training; (iii) hiring procurement and contract management specialists following World Bank (WB) Individual Consultant Selection procedures based on market rates; (iv) Bidding Documents will include actions to be taken on fraud and corruption; (v) the Bank will conduct Post Procurement Reviews (PPRs) by itself and/or using the Auditor Generals, or the Borrower will engage an Independent Procurement Auditor; (vi) adequate office equipment and supplies, such as computers, office furniture and internet facilities, and procurement data management and record facilities will be provided to procurement and contract management specialists; and, (vii) enterprises other than MSEs established by public bodies will not be excluded from participation on tenders of the project. Details on

the shortcomings/risks identified and recommended mitigation measures are provided in Annex 2.

62. Procurement of RLLP will be carried out in a decentralized manner in 152 major watersheds located in six regional states of Ethiopia, and will involve local community participation in procurement as appropriate. The Federal and Regional Project Coordination Units established by MoALR and BoANRs respectively coordinate the procurement activities at the federal, regional and woreda levels. Each implementing agency shall be responsible for conducting its own procurement based on approved consolidated procurement plans and budget cash-flow, and procurement activities will be implemented within the existing procurement structures. Considering the capacity limitations of the implementing agencies, the PCUs to be established at federal and regional levels by MoALR and BoANRs will include procurement and contract management specialists who will assist the respective procurement units.

E. Social (including Safeguards)

63. The project is expected to fund community level infrastructure and income generating activities in the wider context of integrated watershed and landscape management, resulting in reduced land degradation at the community level. The preparation and implementation of MYDPs involves community mobilization and communication to sensitize the beneficiary communities on how they will work together with technical specialists to reduce surface water runoff from the upper watershed, and how they can organize into user groups, to manage the watershed, monitor the treated communal land and gullies, and the subsequent transition to resilient landscapes. The experience of SLMP-II has shown that livelihood improvement activities are critical to SLM. Design of the RLLP incorporates this lesson, and the project will assist participating communities in developing IGAs in an inclusive manner. A Social Assessment (SA) was prepared to help the project respond to social development concerns, particularly in targeting benefits for poor and underserved people while minimizing or mitigating risk and adverse impacts.

64. **RLLP triggers OP 4.10 Indigenous People**.[23] It was determined that the physical and sociocultural characteristics of the proposed intervention areas and the people living in these sites meet the policy requirements. The decision to trigger the policy is also based on the Ethiopian Constitution, which recognizes the presence of different socio-cultural groups, including historically disadvantaged or underserved peoples, as well as their rights to their identity, culture, language, customary livelihoods, socio-economic equity, etc. The social safeguard issues relating to the policy are assessed through an SA and extensive consultation with potential project beneficiaries, including those identified as vulnerable groups and underserved peoples. The consultation enabled communities to voice their views, concerns, and a range of recommendations resulting from the SLMP-II implementation experience, which have been incorporated into the project design. A detailed matrix outlining the GRM, benefit sharing approach, monitoring and evaluation, potential social risks and mitigation actions is included in the SA, which has been disclosed in-country and on the Bank's external website, and is summarized in Annex 5 as the Social

[23] OP/BP 4.10 is the World Bank's Operational Policy on Indigenous Peoples which is 'Underserved Peoples' in the Ethiopia context. In Ethiopia a SDP is the operational equivalent of the Indigenous Peoples Plan, the elements of which are included in Annex 5, and which includes a standard vulnerability analysis of groups meeting OP/BP 4.10 criteria. This vulnerability assessment is integrated into the SA, which includes measures for providing culturally appropriate economic and social benefits for vulnerable groups and, where there are potential adverse impacts on these groups, measures to avoid, minimize, mitigate, or compensate for these impacts, as well as the process to be used in fostering free, prior, and informed consultations for their broad support for the program.

Development Plan (SDP)[24].

65. The budget for the implementation of the SDP activities is embedded in Component 4, to inclusively target underserved peoples and vulnerable groups, and the operational modalities will be included in the PIM, to be finalized within one month of project effectiveness. For risk mitigation measures identified in the SDP and not covered in the various Project components, an indicative budget is tagged. The Project's social development (social safeguards and gender) staff will participate in budget preparation and decision-making processes to support the other team members in aligning SDP measures and targets with overall Project progress on a regular basis.

66. **OP 4.12 Involuntary Resettlement is triggered**. The Project deals with rehabilitation, civil works, treatment of gully sites and community infrastructure, and although the scope of land take would be small, OP4.12 is triggered recognizing that Components 1 and 3 may induce land acquisition, or affect access to and use of natural resources. The Resettlement Policy Framework (RPF) has been consulted upon, and disclosed in-country and on the Bank's external website, to address any issues which might arise from physical or economic displacement, or restriction of access to natural resources. The RPF will ensure that prior to implementation of any activities, Project-Affected People (PAP) are consulted, and appropriate mitigation measures are considered. If needed, a site- specific Resettlement Action Plan (RAP) commensurate to the scope of impact will be prepared.

67. **Gender Analysis, Action Plan and Monitoring**: A Gender Approach and Action Plan is included in Annex 6, to address the gender aspects of land degradation and natural resource use. This draws on an assessment of the SLMP-II gender mainstreaming strategy, and targets the following outputs: (i) equitable participation of both men and women in SLM, CSA, IGA and value chain activities, with an emphasis on gender-sensitive technologies that save women labor and time, and protect their health, such as improved cookstoves; (ii) greater capacity of implementing institutions to mainstream gender issues; (iii) improved entitlement of women to land and enforcement of these rights; and, (iv) enhanced monitoring, evaluation and reporting of gender outcomes.

68. **Grievance Redress Mechanism (GRM)**: Communities and individuals in RLLP operation sites who believe that they are adversely affected by the project may submit complaints to the project-level GRM already established in SLMP-II sites and that will be put in place in the new woredas during preparation of MYDPs, or the Bank's GRS. Areas for improvement of the SLMP-II GRM include scaling-up of best practices for documentation and reporting. Complaints from affected people in SLMP-II included targeting for SLM works and IGAs, and requests for information on the overall operation. Design of the RLLP has built on this experience and the general Ethiopian grievance redress systems as part of a robust risk mitigation measures and uses local institutions as relevant. A Procedural Manual for Regional Public Grievance Redress Offices[25] was developed detailing the procedures, roles and responsibilities to resolve

[24] The SDP for the RLLP was prepared based on the SA and the related in-depth consultations with the affected underserved peoples and vulnerable groups to seek their support for the project. The SDP sets out measures to ensure that: (a) underserved and vulnerable groups affected by the project receive culturally appropriate social and economic benefits; and, (b) any potential adverse effects are avoided, minimized, mitigated, and/or compensated.
[25] The MoFEC in collaboration with Ethiopian Institution of the Ombudsman through the support of the WB supported Promoting Basic Services Phase- III prepared the procedure manual. Since January 2017, the manual is being rolled out to woredas.

beneficiaries' complaints. Grievance committees at various levels of the project will ensure complaints received are promptly reviewed to address project-related concerns, including logging, tracking and documenting.

69. **Citizen Engagement, Consultation and Participation**: RLLP will rely on a participatory approach anchored on the MoALR's Community-based Participatory Watershed Development Guideline (CBPWDG). As part of the safeguards instruments preparation, RLLP conducted stakeholder consultations at sites selected to fairly represent views including fair representation of ethnic minorities, vulnerable groups and underserved peoples. During project mobilization stakeholders will become conversant with safeguards principles and the rationale for participatory approaches.

70. **Labor and Working Conditions**: although the civil works under RLLP are small in scale, to minimize the impact of the influx of external labor on the community, such as (a) unfair wages paid by contractors, (b) increased living costs and food prices in local markets, (c) risk of cultural misunderstanding or exploitation, and (d) risk of sexual exploitation due to workers' relations with local women or girls, the project will draw on the analytical work and proposed action plan which define the RLLP's approach on gender, which is based on an exploration of values and norms, and the legal, social and economic context. The RLLP will ensure adequate risk mitigation measures based on the scope of the civil works to be supported, through; (a) ensuring equitable project benefits for women and girls; (b) promoting prevention, mitigation and referral services to address risks of sexual exploitation and abuse; (c) promotion of fair treatment, non-discrimination and equal pay for equal work for all workers; and (d) having a code of conduct on relationships with the local community incorporated into bidding documents, including labor management procedures to prevent and address sexual harassment, unwanted pregnancies, and intimidation or exploitation of members of the local community.

71. **Safeguards Management Approach and Capacity**: Design of the RLLP draws on lessons learnt through implementation of the SLM Program, including the Bank-financed SLMP-I and SLMP-II. SLMP-II safeguards implementation was consistently rated moderately satisfactory and to date has not encountered any serious problems. Project entities and their staff at all levels are generally trained and ready to implement in the existing 135 SLMP-II woredas. The new woredas will require a start-up period of capacity building to implement safeguards. The project at the federal and six regional levels will have an Environmental officer and Social Development & Safeguards officer who will oversee preparation of the required site-specific safeguards instruments, monitor safeguards due diligence and provide quarterly reports during implementation. The Bank will provide the required support for the designated counterpart staff during project implementation.

F. Environment (including Safeguards)

72. The project is assigned Environmental Category B and has triggered the following safeguard polices: Environmental Assessment (OP 4.01), Pest Management (OP 4.09), Natural Habitats (OP 4.04), Forests (OP 4.36), Involuntary Resettlement (OP 4.12), Indigenous Peoples (OP 4.10), and Safety of Dams (OP 4.37). The environmental issues of the project are primarily associated with the activities of Component 1. The overall environmental impact of the project is positive, especially given that activities play a pivotal role in rehabilitating degraded landscapes and conservation of valuable ecosystems through afforestation/reforestation, and biological and physical soil and water conservation on agricultural lands

and other ecologically critical ecosystems. To maximize positive impacts, the project will use the CBPWDG developed and currently being updated by MoALR, in planning and implementation of watershed management. The project will also play a positive role by building climate resilience through CSA practices and livelihood diversification activities.

73. Limited negative impacts may arise as a result of infrastructure work to be financed, such as construction of water-harvesting structures. The Environmental and Social Management Framework (ESMF) will be used to develop detailed site-specific Environmental Management Plans (EMPs) that will be consulted upon and disclosed prior to the commencement of civil works, and negative impacts will be avoided or mitigated through the implementation of the mitigation measures developed in the EMPs. The ESMF also includes measures for addressing broader environmental and social impacts, including on natural habitats and forests, and an Integrated Pest Management Plan. On Dam Safety, it refers to the FAO Manual on "Small Earth Dams: A guide to siting, design and construction" as well as the MoALR's guidelines on the construction of small dams. The effective use of the ESMF will be regularly reviewed as part of the project's M&E system. The ESMF has been disclosed in-country and on the Bank's external website prior to appraisal in accordance with Bank requirements.

H. World Bank Grievance Redress

74. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service.
For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

Project Development Objective(s)

To improve climate resilience, land productivity and carbon storage, and increase access to diversified livelihood activities in selected rural watersheds.

PDO Indicators by Objectives / Outcomes	DLI	CRI	Unit of Measure	Baseline	End Target
Improve climate resilience and land productivity					
Land area under sustainable landscape management practices		Yes	Hectare(Ha)	406,000.00	1,378,000.00
Land area restored or reforested/afforested		Yes	Hectare(Ha)	108,000.00	136,000.00
Land area with productivity enhancing practices applied		Yes	Hectare(Ha)	6,000.00	80,000.00
Project area showing an increase in NDVI correcting for climate effects			Percentage	0.00	50.00
Project area showing an increase in LSWI correcting for climate effects			Percentage	0.00	50.00
Improve carbon storage					
Net greenhouse gas emissions		Yes	Tones/year	0.00	-680,000.00
Increase access to diversified livelihood activities					

PDO Indicators by Objectives / Outcomes	DLI	CRI	Unit of Measure	Baseline	End Target
Households adopting diversified livelihood activities supported by the project			Number	0.00	192,000.00
Female-headed households participating in diversified livelihood activities supported by the project			Number	0.00	33,600.00

Intermediate Results Indicators by Components	DLI	CRI	Unit of Measure	Baseline	End Target
Component 1: Green Infrastructure and Resilient Livelihoods					
IR 1. Share of target beneficiaries with rating 'Satisfied' or above on project interventions (aspects: livelihoods, environmental benefits, others)			Percentage	0.00	65.00
IR 1a. Share of target women beneficiaries with rating 'Satisfied' or above on project interventions			Percentage	0.00	65.00
IR 2. Targeted major watersheds with Multi-Year Plan Development Plan 100% implemented			Number	0.00	107.00
IR 2a. Targeted major watersheds with Multi-Year Development Plan approved			Number	90.00	107.00
IR 3. Area enclosure as a result of the project			Hectare(Ha)	0.00	36,000.00
IR 4. Land users adopting sustainable land management practices as a result of the project			Number	0.00	460,000.00

IR 4a. Women land users adopting sustainable land management practices as a result of the project			Number	0.00	250,000.00
IR 4b. Female headed households adopting sustainable land management practices as a result of the project			Number	0.00	43,000.00
IR 5. Functional Common-Interest Groups (CIGs) established or supported.			Number	0.00	2,000.00
IR 6. People participating in income-generating activities supported by the project			Number	0.00	345,000.00
IR 6a. Women participating in income generating activities supported by the project			Number	0.00	190,000.00
Component 2: Investing in Institutions and Information for Resilience					
IR 7. Watershed User Associations (WUAs) established and strengthened			Number	0.00	130.00
IR 7a. WUA's with Watershed Management and Use Plan			Number	0.00	90.00
IR 8. Woreda information centers being effectively used by project stakeholders			Number	0.00	107.00
Component 3: Rural Land Administration and Use					
IR 9. Parcels of land surveyed and mapped for certification			Number	1,776,000.00	4,776,000.00
IR 10. Second level land certificates issued as a result of the project			Number	0.00	2,500,000.00
IR 11. Households who have received second level land holding certificates			Number	438,000.00	1,038,000.00
IR 11a. Women who have received second level land holding certificates individually or jointly with a man			Number	300,000.00	750,000.00
IR 12. Landless youth who are members of groups who have been issued a second level certificate or other legal documentation to use			Number	14,000.00	34,000.00

communal land holdings in exchange for restoring land					
IR 12a. Women Landless youth who are members of groups who have been issued a second level certificate or other legal documentation to use communal land holdings in exchange for restoring land			Number	4,200.00	10,200.00
IR 13. Woredas with functioning land administration information systems			Number	0.00	112.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Land area under sustainable landscape management practices
Definition/Description	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.
Frequency	Annual
Data Source	Collected by DA's and other local agents as appropriate. After reviewing by Woreda agent, data is processed by the PSU for reporting.

Methodology for Data Collection	The appropriate package of land management activities restores degraded lands and promotes improved management that not only increases productivity but also enhances resilience by building absorptive and adaptive capacity that limits the adverse effects of climate change. Sustainable landscape management (SLM) practices refers to a combination of technologies and approaches to increase land quality and restore degraded land including catchment management which encompasses a set of different dependent measures in a certain area, with overall planning and management. Characterizing catchment area in terms of watershed basin, this indicator counts as treated the total area of a micro watershed once all the prescribed soil and water conservation measures identified in the relevant Multi-Year Development Plan (MYDP) have been fully implemented. MYDPs are developed in accordance with the Community-Based Participatory Watershed Development Guidelines (CBPWDGs) and consist of a range of land management technologies and approaches designed to restore degraded lands and promote improved management, that not only support increased productivity but also enhance resilience by building absorptive and adaptive capacity that limit the adverse effects of climate change
Responsibility for Data Collection	Federal PCU

Indicator Name	Land area restored or reforested/afforested
Definition/Description	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.
Frequency	Annual
Data Source	Collected by DA's and other local agents as appropriate. After reviewing by Woreda agent, data is processed by the PSU for reporting.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PSU

Indicator Name	Land area with productivity enhancing practices applied
Definition/Description	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.
Frequency	Annual
Data Source	Collected by DA's and other local agents as appropriate. After reviewing by Woreda agent, data is processed by the PSU for reporting.
Methodology for Data Collection	While this indicator measures land area with productivity enhancing practices applied, the effect of these practices on productivity will be measured and reported separately through an impact evaluation.
Responsibility for Data Collection	Federal PCU

Indicator Name	Project area showing an increase in NDVI correcting for climate effects
Definition/Description	The Normalized Difference Vegetation Index (NDVI) measures photosynthetic activity and vegetation cover. Changes in vegetation cover and intensity correlates with improvement in land productivity, increased carbon storage, and greater resilience to climate change due to improved absorptive and adaptive capacity (as per the PDO). Utilizing visible-red and near-infrared spectral bands, NDVI is one measure for detecting vegetation cover and can be used to track changes in vegetation over time. This indicator is meant to add value when used in combination with other indicators, and provides a benchmark for physical achievement under the operation and can be computed using remote-sensed satellite imagery data. Progress under this indicator is tracked by computing, at the pixel-level (using a spatial resolution of 30mx30m), the change in annual average NDVI from baseline over the project period, selecting pixels showing an improvement over the baseline after adjusting for climate effects. NDVI values are computed using medium resolution imagery (i.e. LandSat 8 or Sentinel-2) and incorporating a masking routine to exclude pixels that can result in unreliable estimates (i.e. containing clouds, shadows, water cover, etc.). The share of the project area showing an improvement in NDVI is evaluated after an appropriate lag (i.e. 1 or 2 years) on areas where interventions have taken place (PDO 1). Information on spatial location and timing of interventions in each of the project watersheds is required for tracking this intervention. Assessing performance under this indicator measures change from the baseline and compares this against any change that would have occurred without the intervention (i.e. the counterfactual). Given the lack of satisfaction with how remote-sensing based indicators have performed in the past, largely as a result of failing to control for climate effects, the methodology establishing the 'counterfactual' for comparison will incorporate best practices and state of the art methods and data for modeling index values based on remote-sensed data. To best use improvements in methods or data, the underlying methods and benchmark statistical model may be updated during the course of the project as appropriate.
Frequency	Baseline, Mid-term, Endline

Data Source	Remote-sensed satellite imagery. Uses historical data to develop a model that is used to control for climate effects
Methodology for Data Collection	Remotely-sensed information will be used to measure change in NDVI in project areas over the project period, correcting for climate effects.
Responsibility for Data Collection	PCU with support from external GIS and remote-sensing expert

Indicator Name	Project area showing an increase in LSWI correcting for climate effects
Definition/Description	The Land Surface Water Index (LSWI) measures moisture content in soil and vegetation. Improved land management practices lead to better water retention, less runoff during heaving rains and improves moisture availability during dry seasons, thereby supporting more vigorous and enduring plant growth during periods of little or no rain. Soil and vegetation moisture content correlates with improvement in land productivity, increased carbon storage, and greater resilience to climate change due to improved absorptive and adaptive capacity (as per the PDO). The LSWI is the normalized difference between the near-infrared and short-wave infrared spectral bands and ranges from -1 to 1. This indicator usefully complements NDVI and is meant to add value when used in combination with other indicators. It provides a benchmark for physical achievement under the operation and can be computed using remote-sensed satellite imagery data. Progress under this indicator is tracked by computing, at the pixel-level (using a spatial resolution of 30mx30m), the change in annual average LWSI from baseline, selecting pixels showing an improvement against the baseline over the project period after adjusting for climate effects. LWSI values are computed using medium resolution imagery (i.e. LandSat 8 or Sentinel-2) and incorporating a masking routine to exclude pixels that can result in unreliable estimates (i.e. containing clouds, shadows, water cover, etc.). The share of the project area showing an improvement in LWSI is evaluated after an appropriate lag (i.e. 1 or 2 years) on areas where interventions have taken place (PDO 1). Information on spatial location and timing of interventions in each of the project watersheds is required for tracking this intervention. Assessing performance under this indicator measures change from the baseline and compares this against any change that would have occurred without the intervention (i.e. the counterfactual). Given the lack of satisfaction with how remote-sensing based indicators have performed in the past, largely as a result of failing to control for climate effects, the methodology establishing the 'counterfactual' for comparison will incorporate best practices and state of the art methods and data for modeling index values based on remote-sensed data. To best use improvements in methods or data, the underlying methods and benchmark statistical model may be updated during the course of the project as appropriate.

Frequency	Baseline, Mid-term, Endline
Data Source	Remote-sensed satellite imagery. Uses historical data to develop a model that is used to control for climate effects
Methodology for Data Collection	Remotely-sensed information will be used to measure change in LSWI in project areas over the project period, correcting for climate effects.
Responsibility for Data Collection	PCU with support from external GIS and remote-sensing expert

Indicator Name	Net greenhouse gas emissions
Definition/Description	
Frequency	Annual
Data Source	Ex-Act tool with intervention activity data entered for each micro watershed and processed by the PSU for reporting.
Methodology for Data Collection	Measures net change in CO2 emissions as a result of the project's wide range of on-ground land management and use interventions. Changes in the amount of carbon present in soil, crop, rangeland and forest/trees or mixed or mosaic systems can indicate overall changes in system productivity or degradation, and the extent to which the natural resource is being managed sustainably and can recover to shocks such as drought. The method used is the ExAct carbon balance estimation tool, which calculates carbon accumulation and emissions based on project biophysical output data. Net greenhouse gas (GHG) emissions are calculated as an annual average of the difference between project gross (absolute) emissions aggregated over the economic lifetime of the project and the emissions of a baseline (counterfactual) scenario aggregated over the same time horizon. The indicator value is negative if the project is reducing emissions, and positive if the project is increasing emissions. The economic lifetime of the project is assumed to be 25 years (5 implementation and 20 post-project years, the same time horizon used in the Economic and Financial Analysis) during which a total of 17M tons CO2eq are projected to be offset.
Responsibility for Data Collection	Federal PCU

Indicator Name	Households adopting diversified livelihood activities supported by the project
Definition/Description	This variable captures household's reduced vulnerability to climate change through the adoption of non-traditional activities. By diversifying their livelihood portfolios, households are being proactive in adapting and transforming their livelihoods to limit exposure to future shocks due to climate change and extreme weather events. This indicator is measured as the percent of households engaging in approved, non-traditional activities, relative to the total number of households in the project area. The definition of what constitutes the set of potential non-traditional activities is set out in the Project Implementation Manual (PIM) and applies to activities that are expected to reduce households' vulnerability to future shocks associated with extreme weather events and climate change by diversifying livelihood activities and increasing the resilience of natural (i.e. land) resources. The total population in the project area is approximately 3million, and assuming 5 individuals per household, approximately 640,000 households. The target value reflects a household adoption rate of 30 percent.
Frequency	Baseline, Mid-term, Endline
Data Source	Based on information collected as part of stakeholder/ beneficiary survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	Female-headed households participating in diversified livelihood activities supported by the project
Definition/Description	Female-headed households represent approximately 15 percent of all households and assumes roughly 35 percent adoption.
Frequency	Baseline, Mid-term, Endline
Data Source	Based on information collected as part of stakeholder/ beneficiary survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Monitoring & Evaluation Plan: Intermediate Results Indicators	
Indicator Name	IR 1. Share of target beneficiaries with rating 'Satisfied' or above on project interventions (aspects: livelihoods, environmental benefits, others)
Definition/Description	Captures engagement with stakeholders and extent to which project is meeting stakeholder demand. This is based on a survey administered to households in the project watersheds. The survey instrument is comprised of small number of questions (approx. 15-25), which will measure the extent to which the project reflected expectations and preferences of beneficiaries in the project watersheds. Survey techniques will be used to document male and female beneficiary priorities at project outset. Surveys during and at the close of the project may identify respondents' satisfaction with project investments, including a specific question about the degree to which respondents felt project activities reflected their preferences (ex post). The survey will include the following question: "How satisfied are you that the project activities associated with RLLP are useful to you? [scale 1-5 representing very unsatisfied to very satisfied, with a score of "3" representing neither satisfied nor dissatisfied.]". The indicator will record the percentage of men and women reporting scores of 4 or 5 in response to this question.
Frequency	Baseline, Mid-term, Endline
Data Source	Based on information collected as part of stakeholder/ beneficiary survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU responsible for contracting third party or arranging data collection.

Indicator Name	IR 1a. Share of target women beneficiaries with rating 'Satisfied' or above on project interventions
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 2. Targeted major watersheds with Multi-Year Plan Development Plan 100% implemented
Definition/Description	The Multi-Year Development Plan (MYDP) defines the SLM activities that will be undertaken by the Project to treat each target watershed. At the start of RLLP, 90 MYDPs have been approved for the SLMP-II watersheds, and all are more than halfway completed. By the end of Project, it is expected that MYDPs will have been approved and completed for all SLMP-2 watersheds, plus 17 new RLLP watersheds. This indicator measures the number of watersheds in the project area for which an MYDP has been approved by the Woreda or regional SLMP coordination platform and fully implemented. In a given major watershed, the MYDP is a collection of multi-year plans for each micro-watershed targeted by the project. The MYDP includes baseline data, basemaps, and detailed information on the activities and interventions prescribed to stabilize each of the targeted micro-watersheds (with timelines and budgets). Each activity within a MYDP is assigned an associated activity area. Percent completion of each MYDP is measured as the sum of the activity areas of completed activities, relative to the total activity area of all the activities included in the MYDP. Note that the sum of the activity areas included in a MYDP is less than the total area of the micro watersheds that will be considered treated when the MYDP is completed.
Frequency	Annual
Data Source	Reported by woreda and captured as part of the regular M&E reporting.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 2a. Targeted major watersheds with Multi-Year Development Plan approved
Definition/Description	The Multi-Year Development Plan (MYDP) defines the SLM activities that will be undertaken by the Project to treat each target watershed. At the start of RLLP, 90 MYDPs have been approved for the SLMP-II watersheds. By the end of Project, it is expected that MYDPs will have been approved for an additional 17 new RLLP watersheds.
Frequency	Annual
Data Source	Reported by woreda and captured as part of the regular M&E reporting.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 3. Area enclosure as a result of the project
Definition/Description	This indicator tracks areas where grazing is restricted. Limiting or completely restricting livestock in these areas improves resilience by increasing absorptive and adaptive capacity of the lands treated and, when complemented with other improved management practices like cut-and-carry, increases productivity and potential for generating additional income.
Frequency	Annual
Data Source	Collected by DA's and other local agents as appropriate. After reviewing by Woreda agent, data is processed by PSU for reporting.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 4. Land users adopting sustainable land management practices as a result of the project
Definition/Description	This indicator measures the number of users adopting sustainable land management practices in the project areas. Access to and adoption of climate smart agricultural practices improves resilience to climate change by increasing absorptive capacity, as well transformative capacity when these new practices result in a fundamental change in how land resources are used and managed. Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project. Admissible land management and improved technologies refers to a range of locally appropriate physical activities such as soil and water conservation (SWC), agroforestry, and climate-smart agriculture (CSA) that are supported by RLLP via extension support or financing. These packages are listed in the Community-based Participatory Watershed Management Guidelines, CSA Field Manual, Project Implementation Manual, and other project documentation. Access to and adoption of climate-adapted agricultural practices/technologies improves resilience to climate change. Land users are based on the number of adult individuals within the household who are considered to be land users. In married/joint households where both the wife and husband are engaged in livelihood activities using land, both individuals can contribute to the total number of users. Users of both individually and communally held land are permissible. This indicator is tracked as part of the stakeholder/beneficiary survey.
Frequency	Baseline, Mid-term, Endline
Data Source	Based on information collected as part of stakeholder/beneficiary survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 4a. Women land users adopting sustainable land management practices as a result of the project
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 4b. Female headed households adopting sustainable land management practices as a result of the project
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 5. Functional Common-Interest Groups (CIGs) established or supported.
Definition/Description	This indicator tracks the number of Common-Interest Groups (CIGs) established or supported under RLLP that are active in watershed management and/or income generating activities. Through these groups communities' management of watershed resources are improved, and opportunities for new, non-traditional activities are promoted. Improved community ownership and management of land resources combined with broader livelihood alternatives increases resilience by developing adaptive and transformative capacity. Groups covered under this indicator include, but are not limited to, CIGs for such activities as poultry promotion, sheep and goat fattening, and apiculture promotion. "Established" refers to a documented list of individuals and positions, and by-laws. "Functional" refers to the level of activity as evidenced by minutes and other documentation.
Frequency	Annual
Data Source	Collected by DA's and other local agents
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 6. People participating in income-generating activities supported by the project
Definition/Description	: Measures number of individuals engaged in income generating activities promoted by the project. The associated activities increase opportunities for diversifying livelihood, increasing resilience as a result by developing adaptive capacity as well as having a transformative impact through greater access to non-traditional livelihood strategies. Activities include, but are not limited to, apiculture promotion, poultry production, fattening, fruits, vegetables and cash crops as well as those individuals who are involved in the production and marketing of improved cook stoves. This indicator treats individuals equally whether undertaking activities on their own or as part of a group, in which case the number of active group participants contributes to the total. In some instances, individuals may engage in or belong to one or more groups involved with project-supported income generating activities but should be counted only once. This indicator is tracked as part of the stakeholder/beneficiary survey.
Frequency	Baseline, Mid-term, Endline
Data Source	Based on information collected as part of stakeholder/beneficiary survey and household survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU responsible for contracting third party or arranging data collection.

Indicator Name	IR 6a. Women participating in income generating activities supported by the project
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 7. Watershed User Associations (WUAs) established and strengthened
Definition/Description	By the end of the project period, all SLMP-I (45) and SLMP-II (90) watersheds are expected to have completed their MYDPs and graduated from project-based support for SLM. To help ensure the sustainability of the SLM interventions, the Project will provide support for the creation of Watershed User Associations (WUAs) in each graduating watershed, to replace the project-based Community Watershed Teams (CWTs) and Kebele Watershed Teams (KWTs) with legally recognized institution for the ongoing planning and management of the watershed. This indicator measures the number of such WUAs legally formed for Project watersheds. Watershed Management and Use Plans (WMUPs) agreed by WUAs will detail management and use for graduating watersheds, outlining agreements to conserve and utilize the resources, and establishing bylaws for managing and implementing conservation activities and the distribution of benefits. The development of these WMUPs is critical for ensuring land resources are used and managed in a way that enhances absorptive and adaptive capacity to climate change, promoting resilience broadly at the landscape level. This indicate measures the number of targeted watersheds in the Project area that have developed a WMUP approved locally by the WUA, and either the Woreda or regional SLMP coordination platform.
Frequency	Annual
Data Source	Reported by woreda and captured as part of the regular M&E reporting.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 7a. WUA's with Watershed Management and Use Plan
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 8. Woreda information centers being effectively used by project stakeholders
Definition/Description	Woreda information centers serve as repositories for data, information and knowledge products relating to SLM and make this information publicly available for multiple audiences. Access to relevant and up-to-date information improves decision-making for planning and implementation of climate resilient strategies that are absorptive, adaptive, and transformative. The information provided by these centers includes, for example, best practices, indigenous knowledge and experience of farmers, and scientific knowledge and practices. These centers also collect and document biophysical, socio-economic, and spatial information (i.e. maps) as part of a comprehensive database to track changes and impacts of RLLP. These information centers are expected to be equipped with basic office furniture, computers, shelf cabinets, scanners, photocopiers, as relevant, and may provide space for reading and learning. The functionality and effectiveness of these information centers will be tracked as part of the stakeholder/beneficiary survey.
Frequency	Annual
Data Source	Based on information collected as part of stakeholder/beneficiary survey.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU with relevant regional expert to document the centers' functionality

Indicator Name	IR 9. Parcels of land surveyed and mapped for certification
Definition/Description	This indicator is the total number of parcels surveyed and mapped. This includes the number of individual and communal land parcels surveyed, mapped and registered with the Woreda Office of Land Administration and Use (WoLAU) as part of second-level land certification activities. Interventions that increase tenure security and define associated rights provide holders with an incentive to take a long-term term perspective when managing land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Frequency	Annual
Data Source	Information extracted from NRLAIS database or generated using data collected from Woreda Offices of Land Administration and Use.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 10. Second level land certificates issued as a result of the project
Definition/Description	The number of second-level land certificates issued. This is a WB core indicator for the number of land parcels with use or ownership rights recorded as a result of the Project. Interventions that increase tenure security and define the associated rights provide holders with an incentive to take a long-term term perspective when managing land resources and undertaking investments, increasing productivity and enhancing resilience trough adaptive and transformative means. Note: Second-level certification differs from the earlier first-level certification program by providing additional spatial (i.e. location and boundary) data in the form of a parcel map.
Frequency	Annual
Data Source	Information extracted from NRLAIS database or generated using data collected from woreda land administration offices.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 11. Households who have received second level land holding certificates
Definition/Description	This indicator measures improved land rights as evidenced by the number of households who have received second-level land holding certificates for individual parcels that have been surveyed, mapped and registered by the woreda. Interventions that increase individual tenure security and define the associated rights provide households with an incentive to take a long-term term perspective when managing land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means. Second-level certification differs from the earlier first-level certification program by providing additional spatial (i.e. location and boundary) data in the form of a parcel map. HHs include male-headed, female-headed and jointly-headed HHs. Female-headed households are those usually headed by widows, unmarried, divorced or separated women. The sub-indicator disaggregates the parent indicator to better track improvements in women's land rights under the project.
Frequency	Annual
Data Source	Information extracted from NRLAIS database or generated using data collected from woreda land administration offices.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 11a. Women who have received second level land holding certificates individually or jointly with a man
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 12. Landless youth who are members of groups who have been issued a second level certificate or other legal documentation to use communal land holdings in exchange for restoring land
Definition/Description	This indicator captures the number of individual landless youth that are organized into user groups and who, as a result of the project, have secured greater land rights in exchange for rehabilitating degraded communal land. These rights are documented by a second level certificate or other legal documentation such as a lease, which is issued to a given user group in exchange for rehabilitating and managing the land and applying appropriate SLM practices to sustain land productivity. This innovation has potential for scaling up. Interventions that increase tenure security and define the associated rights provide holders with an incentive to take a long-term term perspective when managing land resources and undertaking investments, increasing productivity and enhancing resilience through adaptive and transformative means.
Frequency	Annual
Data Source	Information extracted from NRLAIS database or generated using data collected from woreda land administration offices.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Indicator Name	IR 12a. Women Landless youth who are members of groups who have been issued a second level certificate or other legal documentation to use communal land holdings in exchange for restoring land
Definition/Description	Same as parent indicator.
Frequency	Same as parent indicator.
Data Source	Same as parent indicator.
Methodology for Data Collection	
Responsibility for Data Collection	Same as parent indicator.

Indicator Name	IR 13. Woredas with functioning land administration information systems
Definition/Description	Institutions that support good land governance and land administration play a key role in defining and enforcing land holder rights, which enhances tenure security. Security of tenure requires reliable and up to date land information whereas the sustainability of functional land administration depends on the ability to keep the land information constantly up to date. The data contained in the information systems reflect actual physical and legal data of the parcels, their landholders or possessors and match with the reality on the ground (reflecting the actual link between the cadaster and the register, and the reality on the ground). All the information registered in the systems comes from data accurately collected in the field and this can be managed effectively through a functional land information management system such as NRLAIS. This indicator will track Woredas with NRLAIS installed and managing land administration services in daily basis. Security of tenure allows rights holders to take a long-term term perspective when managing land resources and undertaking investment, increasing productivity and enhancing resilience trough adaptive and transformative means.
Frequency	Annual
Data Source	Information extracted from NRLAIS database or generated using data collected from woreda land administration offices.
Methodology for Data Collection	
Responsibility for Data Collection	Federal PCU

Note to Task Teams: End of system generated content, document is editable from here.

Glossary

Communal land *- refers to land whose rights to use and access are assigned to a group or community (as opposed to an individual). Under second level land certification such land is designated as communal.*

Female-headed households *are those usually headed by widows, unmarried, divorced or separated women.*

Individually held land *- refers to land where rights to access and use land are assigned to individuals (as opposed to groups). Typically, this will include cultivated farmland and homestead plots. Under second level land certification such land is typically assigned to an individual or individuals (i.e. household members).*

Micro watershed *is equivalent to a minor or community watershed and the smallest planning unit within the major watershed.*

Major watershed *is equivalent to critical watershed. A typical major watershed will be comprised of approximately 8-12 micro watersheds.*

Multi-Year Development Plan *- a watershed development plan prepared by the community in accordance with the CBPWDG, outlining the activities to be undertaken under RLLP in order to stabilize the watershed so that it is no longer at risk of further degradation.*

Project area *is total land area of major watersheds included under RLLP. This includes new watersheds introduced under RLLP in addition to those receiving support under SLMP-I and SLMP-II.*

Project beneficiary *- an individual or group directly targeted by the project or included in the project area. Project beneficiaries are a sub-set of project stakeholders.*

Project stakeholder *- an individual or group whose interests are impacted (positively or negatively) by the project or whose interests can impact the project. In addition to project beneficiaries, stakeholders include development partners, local governments, partner organizations and anyone outside the project area who will be impacted by the project.*

ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY : Ethiopia
Ethiopia Resilient Landscapes and Livelihoods Project

1. The project builds on the wealth of technical, operational and institutional experience and lessons learnt through the implementation of the Government of Ethiopia (GoE)'s Sustainable Land Management (SLM) Program, including the Bank-financed SLMP-I and SLMP-II, as well as similar initiatives supported by other bilateral and multilateral partners in the country and the region. Complementing the core investments in biophysical watershed restoration, the project includes a set of complementary activities, aimed at strengthening the basis for beneficiary communities to derive sustainable livelihoods from restored landscapes through support for climate smart agriculture, diversified income-generating activities, connections to value chains, and improved land tenure.

2. The project area includes a total of 152 major watersheds located in the Ethiopian Highlands, averaging approximately 10,000 hectares each, comprising an estimated 2,122 micro watersheds, and covering a total project area of approximately 1.5 million hectares. A phased approach will be adopted in the form of support provided to watersheds, differentiating between those selected under SLMP-I, SLMP-II, and newly identified for RLLP. The forty-five watersheds supported under SLMP-I will receive technical assistance to graduate from project-based support to long-term maintenance of landscape productivity. To facilitate this transition, the RLLP will support the creation of WUAs, build local government capacity to design and manage SLM interventions, strengthen incentives for household investment in SLM through land certification, and help improve returns to sustainable productive activities by forging connections to value chains. Project support for the ninety SLMP-II watersheds will allow implementation of their MYDPs for watershed restoration to be completed, prior to provision of graduation support as for SLMP-I watersheds. Seventeen new watersheds have been selected for RLLP based on criteria set out in the Ethiopia Strategic Investment Framework for Sustainable Land Management (ESIF), prioritized based on extent and severity of land degradation. These new watersheds will receive technical assistance for the preparation of MYDPs, followed by investment in SLM and CSA practices.

3. RLLP will be implemented through four integrated components: (i) green infrastructure and resilient livelihoods; (ii) investing in institutions and information for resilience; (iii) rural land administration and use; and (iv) project management and reporting.

Component 1. Green Infrastructure and Resilient Livelihoods (Total: US$78.5 million of which US$65 million (SDR45.9 million equivalent) from IDA, US$8.5 million from MDTF, and US$5 million from GoE)

4. The objectives of this component are to support the restoration of degraded landscapes in selected micro-watersheds and to help build resilient livelihoods on this newly productive foundation. This will be achieved through: (i) the implementation of sustainable soil and water conservation practices in line with MYDPs in SLMP-II and newly identified watersheds; (ii) support for the adoption of climate-smart agricultural practices in all project watersheds; and (iii) promotion of livelihood diversification and linkages to value chains in all project watersheds.

5. This component will complete the implementation of SLWM practices by rural smallholders and communities under MYDPs in SLMP-II watersheds, and scale up these proven interventions to seventeen

additional watersheds (average 10,000 ha each) that are vulnerable to climate variability and change, recurrent drought and floods, and land degradation. SLWM interventions on both communal and individual lands will be financed (with differentiated levels of community contribution), as well as infrastructure such as green corridors linking fragmented forests, and community access roads designed to optimize water-harvesting, together with the necessary technical advice for specific outputs, such as the preparation of MYDPs and WMUPs, and the establishment of WUAs. Proven SLWM practices include: soil and water conservation infrastructure such as terraces, water harvesting trenches, check dams, small reservoirs, and other civil works; soil fertility and moisture management; assisted natural regeneration, enclosures plus livestock land use rationalization, intercropping, low tillage, gully reclamation, establishment of grazing corridors, watering points and wells, and sylvo-pastoral management strategies. Government Development Agents (DAs) in the Bureaus of Agriculture will mobilize and support communities and receive continuous training to ensure quality advice and extension services.

6. The objectives of this component will be achieved through the implementation of the following sub-components: (i) land restoration and watershed management; (ii) climate-smart agriculture; and (iii) livelihood diversification and connections to value chains.

Sub-component 1.1: Land Restoration and Watershed Management (Total: US$57.5 million of which US$49 million (SDR34.6 million equivalent) from IDA, US$3.5 million from MDTF, and US$5 million from GoE)

7. This sub-component will focus on the implementation of land rehabilitation measures and establishment of green infrastructure required for the rehabilitation mainly of communally-owned degraded forest, pasture and woodlands, but also privately cultivated lands, through biophysical land and water conservation measures. One key objective of this sub-component will be to create benefit streams for the communities in the targeted micro watersheds from increased ecological services and land productivity, mainly through productive use and management of landscape resources. In addition to the proven practices applied during SLMP-II, this sub-component will also introduce the establishment of green corridors, which will enhance watershed restoration and ecological connectivity, as well as expand the lifespan and resilience of drainage and road infrastructure.

8. The objective of the sub-component will be achieved through biological and physical conservation measures that ensure reduced surface run-off and soil erosion, as well as improved land productivity, resulting in enhanced crop and livestock production. The following activities will be supported:

- **Soil and water conservation measures** on communal and privately cultivated lands: biological and physical soil and water conservation measures/practices such as construction of terracing, check dams, water harvesting (e.g. trenching), reseeding, re-vegetating, etc. will be implemented on degraded communal and farm lands;
- **Gully rehabilitation:** Cost efficient biophysical gully restoration techniques such as sandbag check dams, sediment storage dams and gabion-check dams will be applied. Productive use and management of the rehabilitated gullies will be supported, such as for forage, fruit and fuel wood production;
- **Establishment of green corridors**: Planting suitable, preferably native, tree species along rivers/streams and all-weather roads connecting forest patches in the watersheds. Post plantation management support including tending, hoeing and soil moisture conservation will be carried out. Green corridors will also be established along gully offsets to ensure stability and productive use of the land;

- **Area closure management and use**: assisted natural regeneration through restrictions on free grazing, enrichment planting, soil fertility improvement and moisture retention will be implemented in communal areas and/or privately managed degraded bush and woodlands. Cost efficient management practices of enclosures will include supporting local communities in the preparation and execution of participatory use and management plans of enclosed areas, including forage cut-and-carry arrangements;
- **Establishment of plantation blocks**: Reforestation and afforestation of degraded forest and shrub/bush lands with a diverse range of tree and shrub species that can be used as a source of food, feed and energy, and enhance fertility of the soil. Planting of appropriate tree seedlings including economically valuable species, and post-plantation management practices such as tending and watering in moisture stressed areas, hoeing and weeding during early stages will be carried out to ensure survival of the planted seedlings; and
- **Enrichment of degraded pasture and rangeland**: Planting and reseeding of appropriate forage species including fodder crops in degraded pasture and rangelands to increase productivity and improve the value of feed for grazing animals. Management of unpalatable evasive species will also be undertaken in pasture and rangelands to ensure optimum forage production.

9. Suitable rehabilitation interventions for each micro-watershed are determined based on their particular agro-ecological conditions, and incorporated in a MYDP developed through a participatory process, utilizing the technical parameters and procedures established in the CBPWDG, 2005 developed by MoALR, and currently being updated. MYDPs already exist for SLMP-II watersheds, but technical assistance will be provided under this sub-component for the preparation of MYDPs for the new watersheds to be treated, as well as for the preparation of WMUPs and the creation of WUAs for those SLMP-I watersheds graduating from project-based support.

10. Supported by the zonal, regional and national Platforms (see details in Annex 2), implementation of MYDPs is undertaken jointly at the woreda and kebele levels through the Woreda SLM core team, the KWT, and the beneficiary communities. Together with the kebele Development Agents (DAs) and CFs, the Woreda SLM core team and KWT assist communities in: (i) developing annual work plans and budgets for submission to the Regional PCUs for endorsement and integration into the Regions' work plans and budgets; (ii) facilitating community participation in watershed planning and rehabilitation; (iii) identifying training needs; (iv) monitoring and evaluation; and (v) dissemination of experiences and results. The operational details for the planning, design, and implementation of MYDPs are included in the PIM.

Sub-component 1.2. Climate-Smart Agriculture (Total: US$15 million of which US$10 million (SDR7.1 million equivalent) from IDA and US$5 million from MDTF)

11. Interventions under this sub-component will aim at enhancing the livelihood resilience of beneficiary households through CSA interventions in selected micro-watersheds assisted by the project. The improved adaptation of restored watersheds to variable rainfall patterns and adverse climatic events, combined with reduced degradation-related risks (achieved through sub-component 1.1), will provide suitable conditions for beneficiaries to adopt improved, climate-smart farming practices and diversify and/or intensify their current production systems. For this, technical and financial assistance will be provided to stabilize soils and increase fertility; improve water retention, harvesting and infiltration; increase biomass (and carbon) accumulation; and promote the adoption of climate-smart tillage and production practices in farm plots and home gardens.

12. This sub-component will build on the achievements of sub-component 1.1, such as improved water retention and infiltration, gully and degraded hillside stabilization, and enhanced biomass production. This connection to the biophysical restoration of the landscape is important, as it will help ensure that unsustainable agricultural practices do not reverse prior restoration measures. In this way, agricultural activities become fully integrated into the watershed/landscape restoration approach and contribute towards the goal of climate resilient watersheds. The ongoing pilot within SLMP-II and lessons from international experience indicate that CSA cannot be achieved by a single measure or practice. In order to achieve the triple wins of adaptation, mitigation and increased production, technical and financial assistance will be provided to implement context-specific packages of CSA activities. The following CSA activity packages will be supported under this sub-component:

- **Farm water and soil moisture management:** This will include *in situ* soil moisture management practices such as improved tillage, mulching/permanent soil cover and water harvesting including construction of cut-off/on drains and road water harvesting. Provision of improved farm tools/machineries for moisture conservation tillage will be considered under this activity;
- **Integrated soil fertility and soil health management**: Various soil fertility management practices such as improved compost making including bio-slurry, vermi-compost and manure management (including bio-digestors); lime and gypsum application for acidic and alkaline soils respectively; promotion of tree-crop-livestock systems (agro-forestry practices); and crop rotation and legume intercropping will be integrated as a package and promoted based on local conditions and farmers indigenous knowledge and commitment;
- **Crop development and management**: Access to better performing crops (drought and disease resistant) will be supported based on local-level adaptive research and crowd-sourcing by farmers over a wide range of crop varieties (both local and improved cultivars). Integrated pest and disease management, including post-harvest management, will be practiced to minimize crop yield losses. Productive use of increased soil moisture through production and management of high value crops, such as vegetables and fruits, will also be part of this activity package. Improved farm tools and machinery such as line planters, tillage and harvesting equipment will also be tested to improve the efficiency and effectiveness of the cropping system; and
- **Environmentally-friendly livestock production through forage development and management**: High quality and quantity forage in pasture and along farm boundaries, gullies and back yards will be a priority to minimize dependence on crop residue as livestock feed, as a means to help ensure increased use of biomass for soil fertility improvement. Efficient use of livestock feed resources through feed treatment and improvement of feeding troughs will also be implemented to reduce losses. Appropriate integration of agro-silvo-animal husbandry practices will be introduced at homestead level based on the needs of local farmers and the suitability of local conditions. Practicing an integration of multi-purpose food and tree cropping with livestock rearing at the homestead can improve the fertility and organic matter content (including carbon) of soils, and increase crop yields and household food security.

13. CSA interventions under RLLP will be implemented in 200 micro-watersheds that have already been supported with landscape restoration during SLMP I and II. The following set of criteria and weight was used to select eligible micro-watersheds: (i) at least 75 percent of the watershed restoration/rehabilitation plans completed (25% weight); (ii) community agreement/bylaw on cut and carry/controlled grazing enforced (20% weight); (iii) forage development along gullies, farm bunds, pasture lands and homestead are partly implemented (15% weight); (iv) farmland covering more than 50 percent of the micro-watershed area (10% weight); (v) access to functional Farmer Training Centres (FTCs) (10% weight); (vi) adjacent to SLMP-II CSA pilot watersheds (10% weight); (vii) local knowledge or traditional practice of multi-cropping system (5% weight); and

(viii) commitment of community and kebele watershed teams (5% weight).

14. Consistent with existing limitations, the operational unit for CSA interventions in eligible micro-watersheds will be groups of organized farmers and their corresponding contiguous farm plots. The number of groups and farm plots will be determined during the planning phase based on the budget allocated to the woreda for CSA. CSA groups will be organized by the DAs assisted by woreda experts. In each group, the number of members should ideally range between 20 and 30 farmers. These groups will constitute the equivalent of the CIGs promoted by AGP, which will prepare results-oriented subproject proposals, integrating packages of goods, small works, services and/or operating costs) for RLLP financing. The project will provide required inputs to the CSA interest groups to improve efficiency of the farming practice. The operational procedures –including procurement methods--for the implementation of the CSA subcomponent of the project will be included in the PIM.

15. CSA is knowledge intensive and entails moving toward an agro-ecological approach. Project practitioners will therefore need to extend their support to beneficiaries beyond the planning phase and provide technical assistance throughout the entire adoption cycle. For this, the workload of the local technical structure will include resources to: (i) conduct periodic visits to the plots of farmers implementing CSA practices, (ii) establish demonstration or testing plots, and (iii) organize and conduct dissemination activities such as field days and farmer exchange visits. Equally important, the regional structure should be capable of providing technical backstopping to DAs, through periodic joint field visits, on-farm refresher training, as well as assistance in planning and conducting demonstration activities.

16. CSA technology testing and demonstration activities, as well as collaboration with research and academic institutions, will be part of CSA implementation. For this, FTCs or similar structures will be identified and utilized at the watershed level, while contributions by research and academic institutions for the identification of appropriate technologies and practices will be implemented through the establishment of a CSA Innovation Platform supported by a consortium of CGIAR organizations.

Subcomponent 1.3: Livelihood Diversification and Connection to Value Chains (Total: US$6 million (SDR4.2 million equivalent) from IDA)

17. Beyond physical and biological measures, the Sustainable Land Management Projects (SLMP-I and SLMP-II) have promoted livelihood diversification and income-generating activities that both improve community resilience, and provide an incentive for maintenance of restored landscapes. About 1,446 beneficiary groups supported by SLMP-II are engaged in income-generating activities such as apiculture, poultry, sheep and goat fattening, and vegetable and fruit farming, and have contributed to the reduction of pressure on watersheds' natural resources through the promotion of improved cook stoves. Based on a review of this experience, RLLP will expand these interventions, and strengthen them through stronger engagement with the private sector. The objectives of this sub-component are to (i) increase resilience by diversifying livelihoods, and (ii) help ensure livelihood sustainability by better connecting products with value chains. IDA financing under this sub-component will lay the foundations to scale up these activities through potential additional financing from the GCF.

18. This sub-component will provide technical assistance and small grants to CIGs to develop productive livelihood diversification activities. These semi-formal groups are established based on MoALR-approved

guidelines for organization, planning and financing, and are the main community-level organizational unit used under the Bank-supported AGP-2, which supports some 4,375 CIGs in 96 woredas. Key characteristics of CIGs include the following:

- A focus on crop or livestock production, processing and marketing;
- No more than 20 members each, with only one per household, promoting and supporting women and youth in particular;
- Governed by written rules and regulations (bylaws), which establish a clear structure, including a general assembly of members and a managing board;
- Formation steps include preparation of a business plan, supported by kebele Cooperative Experts and DA's, who also provide ongoing guidance and advice.

CIGs supported by RLLP will also benefit from technical advice and training provided by economic growth advisors associated with GIZ's SURED program. By using the same community-level unit for livelihood diversification, RLLP will facilitate coordination with other programs supported by MOALR, including AGP-2, while specifically targeting communities living in degraded watersheds and focusing on activities linked with SLM.

19. Particular emphasis will be given to the establishment of CIGs for the production and marketing of improved cookstoves. This not only provides an alternative source of income, but also delivers multiple co-benefits, including time-saving for women and girls in fuelwood collection, health improvements through reduced household air pollution, and reduced pressure on local biomass resources through improved household energy efficiency. As heating and cooking efficiency improves, use of manure and crop residues for cooking and heating declines, allowing these materials to be used on fields to enhance soil fertility. For the production and marketing of improved cookstoves, the RLLP will collaborate at the woreda level with (i) the Office of Cooperative Promotion, to support organization of CIGs to produce energy efficient cook stoves and host demonstrations at local markets and gatherings, and (ii) the Energy, Water and Mineral bureau, to provide technical experts to conduct training for the producer groups.

20. Support for connections to value chains will target beneficiaries in 16 pilot woredas (four per region) where (i) implementation of the MYDP is already advanced, (ii) RLLP is providing support for CSA, (iii) GIZ SURED support is available, so that SURED Economic Development/Value Chain experts can provide technical assistance, and (iv) other programs supporting private sector development activities can complement RLLP efforts. In addition to market development activities supported by AGP-2 and the Agricultural Transformation Agency, other examples of such programs include USAID's Feed the Future (FtF) value chain activity, and the USDA Feed Enhancement for Ethiopian Development (FEED) Project, which has supported the development of at least 21 cooperative union-based feed manufacturing mills and is seeking opportunities to expand support for forage development. RLLP will provide support for value chain connections in the form of (i) business plan development, (ii) small equipment for grading and processing, as well as storage facilities, (iii) collaboration with other value chain programs to facilitate market linkages, and (iv) development of contracts with cooperatives, cooperative unions and other private sector partners.

Component 2. Investing in Institutions and Information for Resilience (Total: US$12.5 million of which US$6 million (SDR4.2 million equivalent) from IDA, and US$6.5 million from MDTF)

21. The objective of this component is to build capacity for the promotion and management of SLWM practices, and improve information for better decision-making in supporting resilient landscapes and diversified rural livelihoods in the project area.

22. This component will provide technical assistance at the local level (woreda and kebele) to build local government capacity for planning and managing SLWM interventions. This will include piloting of new technologies for information modernization at the local level, including the use of electronic tablets for gathering geospatial information, and the use of UAVs – or drones for land certification mapping. Support for policy development under this component will focus on the regulatory framework for WUAs, community byelaws guiding land-use practices, and strengthening the Land Administration System. To enhance the evidence base for sustainable land management decision-making, this component will support three separate but linked impact evaluations, of (i) biophysical impacts at the landscape level, (ii) livelihood outcomes at the household level, and (iii) CSA productivity gains at the plot level. This component will also provide resources to manage the knowledge generated through these and other assessments of SLWM, and to communicate the lessons learnt to a broad audience, including local governments and communities, relevant research institutions and Government agencies, as well as Development Partners.

23. This component's objectives will be achieved through the implementation of the following sub-components: (i) capacity building, information modernization and policy development; and, (ii) impact evaluation, knowledge management and communication.

Sub-component 2.1. Capacity Building, Information Modernization and Policy Development (Total: US$7.5 million of which US$3 million (SDR2.1 million equivalent) from IDA and US$4.5 million from MDTF)

24. This sub-component will provide technical assistance at local government level to implement RLLP, and to help build the capacity required to sustain SLWM interventions after watershed graduation from project-based support. To achieve this, the sub-component will finance (i) part-time CFs at the kebele level (five CFs for each major watershed), and (ii) accountants to support the heads of the WoANRs with project administration. The sub-component will also provide targeted inputs for specific technical needs, including: (i) development of an approach for community monitoring of surface and groundwater, as part of WMUPs; (ii) piloting local access to publicly available agri-weather information; and (iii) training in cadaster development and land registration.

25. The sub-component will support information modernization to coordinate data collection and information sharing at all levels and under all components of the project so that this information is well organized, properly documented and accessible. As part of this effort, a data management plan will be developed which specifies how all data used or created during the course of RLLP will be documented, stored and otherwise managed. The use of electronic tablets to collect information on project activities and results, combined with appropriate survey and mapping software, will improve the quality and timeliness of data collection and reduce the effort needed to compile, review, and generate the necessary reports. This framework will facilitate access to information and support timely feedback to the local level, and will also pilot the use of UAVs, or drones to generate high-quality and timely aerial imagery data to support planning, monitoring, and land certification.

26. Policy development under this sub-component will focus on: (i) the regulatory framework required for the establishment of WUAs, and community byelaws guiding land-use practices; (ii) frameworks for reward and

incentive schemes such as PES; and (iii) strengthening the rural land administration system. In developing the framework for WUAs, the project will work closely with regional governments for its application in establishing WUAs, first for the 45 SLMP-I watersheds graduating from project-based SLWM support, and subsequently for the graduation of the 90 SLMP-II watersheds, once implementation of their MYDPs has been completed. Building on the recent agreement reached between MoALR, the local community and Raya Brewery-BGI Ethiopia for investment in SLWM at the brewery's water source in the Tigray Region, this component will seek further opportunities to reach agreements with other private and public-sector entities for PES for SLWM, and will support the development of policy and a standardized approach for such initiatives.

Sub-component 2.2. Impact Evaluation, Knowledge Management and Communication (Total: US$5 million of which US$3 million (SDR2.1 million equivalent) from IDA, and US$2 million from MDTF)

27. Impact evaluations (IEs) will use rigorous research methods to look at specific interventions under RLLP, assess the contribution of these to development goals and provide robust evidence of SLM impact. Project funding will focus on the evaluation of bio-physical impacts and CSA productivity gains, which will be conducted in coordination with a livelihoods impact evaluation to be led by the Gender Innovation Lab of the World Bank's Africa Region, financed separately. The bio-physical impact evaluation will examine the response of the environment to SLWM interventions, considering parameters such as peak and base surface water flows, groundwater levels and recharge rates, sediment loads, and remotely sensed information on vegetation cover and soil moisture. For the purposes of this evaluation, the project will extend the existing partnership between MoALR and the WLRC of Addis Ababa University. The evaluation of the CSA productivity gains will be conducted through a partnership between MoALR and CGIAR institutions, while the Environment and Climate Research Centre of EDRI will be engaged to build synergies between the three evaluations and draw policy recommendations.

28. To build a solid and effective knowledge management system both for RLLP and the broader SLMP, this sub-component will put in place a geospatial knowledge platform that combines information from a variety of project and other sources, and packages this in a format that is accessible to planners and stakeholders at the national, regional, and local levels. This activity will build upon the work being done by WLRC under SLMP II to develop a web-based knowledge management system.

29. A strategic communication program will be developed and implemented under this sub-component to inform and mobilize communities, enhance project visibility and transparency among all actors, support efforts to scale-up SLM and CSA practices, build support for the land certification program, and facilitate effective risk management. Possible activities include:

i. knowledge identification, capturing, validation and packaging annually to support scaling up efforts, build capacity of user groups, youth groups, DAs and FTCs (experiential knowledge, best practice and synthesis of explicit knowledge products from various sources such as the geo-spatial knowledge platform, the CSA Innovation Platform, model watershed, etc.);
ii. strengthening and enhancing functionality of existing FTCs and SLM information centers at woreda level and establishing info centers in new woredas;
iii. outreach activities (i.e. production of printed, audio and video materials to be used as supporting tools during workshops and events, and media tours for journalists and PR officers of relevant regional bureaus to show project results);

iv. knowledge sharing and networking events, including field days and farmer exchange visits from kebele to kebele to share the benefits of resilient practices and induce their adoption, experience-sharing visits for woreda administrators and other leaders to SLM sites and demonstration plots where CSA practices are being implemented, and an annual SLMP Knowledge fair;
v. advocacy activities to support private sector engagement, policy development and other key initiatives for effective implementation of RLLP (for example organization of stakeholder workshops and study tours for government officials);
vi. grassroots level behavior change campaign targeted to major/critical watersheds, based on preliminary research to define appropriate media (drama, storytelling, etc.) and effective messengers (i.e. community/religious leaders) and gauged throughout the duration of the program through a mix of qualitative/quantitative research methods (FGDs, community level meetings, survey); and,
vii. public information awareness activities on land registration and cadastral surveys, land laws and procedures and conflict resolution mechanism, and to explain the benefits of (formalized) rentals to help unlock the blockage set by cultural norms, emphasizing that temporary land renting does not imply abandonment and formalized rental contracts do not result in land being expropriated.

Component 3. Rural Land Administration and Use (Total: US$23 million of which US$20 million (SDR14.1 million equivalent) from IDA, and US$3 million from MDTF)

30. The objective of this component is to strengthen the rural land administration system that secures tenure rights, optimizes land use, and empowers land-users to sustainably invest in productive landscapes. The component will provide security of tenure to smallholder farmers in RLLP watersheds through SLLC as an incentive to increase the adoption of SLM technologies and practices. This component will also extend the on-going local-level participatory land-use planning exercise at kebele level within RLLP watersheds, and will support the rollout of the NRLAIS in RLLP woredas.

31. RLLP will provide resources for orthophoto production, para-surveyors for field level data acquisition, and data encoders for office level data management. It will support the use of low-cost surveying and mapping technologies, and will pilot drone aerial mapping and mobile mapping using tablet computers. Activities to be supported will include (i) orthophoto base map preparation, (ii) consultations on land rights using orthophoto base maps, (iii) scanning and geo-referencing of adjudication maps, vectorization of parcel boundaries and keying-in of attribute information, (iv) public display for validating parcels (shape and size) and landholders' information, (v) parcel map and Landholding Certificate preparation, production, authentication and issuance, and (vi) procurement of equipment, materials and consumables for cadaster and land registration activities. Technical assistance will be provided to support consultation workshops for land-use plan development at kebele level, and to connect these consultations to the larger land-use planning exercises being undertaken at the regional and national levels.

32. The development of NRLAIS software started in 2015, with the prototype version completed and tested in 2017. A production version was delivered to the MoALR in March 2018, and an Operational Acceptance Report was prepared based on the testing of this version. The NRLAIS roll-out will be divided into two phases of two years each, starting with a comparative trial of 4-6 months which may reveal necessary improvements and changes, followed by a period of roughly 18 months with enough active installations to ensure its readiness for large-scale roll-out. The second phase will continue the rollout at increased speed, addressing sustainability factors. Rollout of the NRLAIS is expected to provide security, transparency, and maintenance of land

information, with enhanced data management functionality and usability at woreda level in an effective, spatially integrated, and sustainable manner. It will also equip the regional and federal authorities with an adequate tool to produce and use statistical data on rural land tenure and land use that will facilitate evidence-based monitoring, and will help ensure a coordinated and consistent approach to the development of policies and legislation for sound land governance across the country. This component has been developed in close consultation with land administration support from other development partners, including the in Ethiopia REILA[26] Project being implemented by Finland, the Project LIFT[27] being implemented by the DFID, as well as programs supported by GIZ and USAID. Through these consultations it has been agreed, for example, that in Gambella RLLP will support NRLAIS roll-out at both the regional and RLLP woreda levels, given that no other development partners have interventions in this region. During implementation of RLLP, coordination with relevant development partners will be ensured through the G7 Donor Working Group on Land[28].

33. At the woreda and kebele levels, implementation of this component will be undertaken jointly by the WoLAU through the Kebele Administration Offices, the KLAUC, the Land Administration and Use DAs, and the communities. Field teams will be contracted, trained and deployed, each comprising a team leader, a para surveyor, a data recorder, a digitizer, and a Woreda GIS expert and a supervisor, to facilitate and undertake the field and office level land certification activities. Woreda and kebele land use teams will anchor the preparation of Participatory Local Land Use Plans. At the regional and zonal levels, the Bureau of Land Administration and Use and related agencies will lead the implementation of this component of the project with support from the Regional RLLP PCU. At federal level, the Rural Land Administration and Use Department (RLAUD) in the MoALR will be the main focal point for policy, planning, and implementation guidance to RLLP regions and woredas. A NRLAIS rollout support unit established at regional and federal levels will provide technical assistance for this activity.

Component 4. Project Management and Reporting (Total: US$15 million of which US$9 million (SDR6.4 million equivalent) from IDA, US$1 million from MDTF, and US$5 million from GoE)

34. The objective of this component is to effectively consolidate plans and budget, implement and report on project activities with due diligence and integrity.

35. Under this component, RLLP will finance the staffing and operational costs of the PCUs in MoALR and Regional State Bureaus of Agriculture and Natural Resources. These PCUs will carry out all fiduciary aspects of project implementation including financial management, procurement, environmental and social safeguards, and M&E reporting. Reporting at the federal, regional, woreda and community levels will aim to ensure sound tracking of progress information (activity/output level results) and to evaluate information from a variety of

[26] REILA II is a four-and-a-half-year project with a total budget of EUR 7.81 million. The project aims to: 1) Improved regional LA and increased and certified land tenure security for land users (in 6 Woredas in Benishangul Gumuz and 11 Woredas in Amhara region) and NRLAIS rollout; 2) Improved capacity for federal and regional LA for planning, management and coordination, and for accurate and efficient land surveying; and 3) Improved supply of skilled manpower to the LA sector.

[27] LIFT with a total funding of 63 million pound operates in four regions (Oromia, Amhara, SNNR, and Tigray). LIFT aims to support the Government of Ethiopia in the provision of map based land certificates to farmers and assist them to fully benefit from increased investment and productivity through the development of the rural land market and its supporting operations.

[28] In 2013, the Governments of Ethiopia, the United Kingdom, the United States of America, and the Federal Republic of Germany announced an agreement to enter a land country partnership to work together to improve rural land governance for economic growth and to protect the land rights of Ethiopians. The partnership was envisioned to build on existing programs and serve as a vehicle for increased coordination and collaboration among the Government of Ethiopia and its development partners. Since then the WBG has been an active member of the G7 Land Partnership through its active operations managed under ENR portfolio such as SLMP, OFLP, and CRGE TA.

sources relevant to outcome level results, to promote learning and adaptive management. The outputs under this activity include: (i) implementation of a new Results-Based M&E Plan based on clear guidance on what to collect and how to collect it (indicator protocols); (ii) a well-functioning MIS system; (iii) improved capacity of stakeholders in M&E; and (iv) improved quality of information collected. For more details on implementation and institutional arrangements, see Annex 2.

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY : Ethiopia
Ethiopia Resilient Landscapes and Livelihoods Project

Project Institutional and Implementation Arrangements

1. The organizational structure for the implementation of the ongoing SLMP-II will be maintained and strengthened for the execution of RLLP. Implementation will be carried out at five levels: federal, regional, zonal, woreda (district) and kebele (sub-district).

2. RLLP will be implemented by existing GoE structures and community institutions. Implementation will be decentralized with beneficiary communities assuming primary responsibility for executing most project activities in the watersheds. As was the case in SLMP-II, the success of RLLP core interventions will depend on strong community-based institutions. For this, the project will support the strengthening of existing community structures, while building new ones in newly selected watershed areas. The necessary backstopping and coordination of technical support for activities to be implemented by communities in the watersheds will be provided by experts of the WoANR and WoLAU, supported by Woreda Development Agents (DAs), project-funded CFs, and providers of technical assistance contracted by RLLP, with training and quality assurance provided through the GIZ SURED project.

3. A PIM, to be finalized within one month of project effectiveness, will guide the implementation of the project. The PIM will cover the following aspects: (i) detailed implementation arrangements by component, including institutional arrangements, roles and responsibilities; (ii) identification and characterization of watersheds selected; (iii) the subproject cycle; (iv) detailed implementation schedule; (v) financial management and reporting; (vi) procurement; (vii) monitoring and evaluation; and (vi) procedures for the implementation of the Environmental and Social Management Framework.

4. At the local level, implementation of MYDPs is undertaken by CWTs, KWTs, and the Woreda SLM core team. Together with part-time CFs, paid by the project), and full-time kebele Development Agents (DAs), these structures will: (i) facilitate community participation in preparation of MYDPs; (ii) develop annual work plans and budgets; (iii) identify training needs; and (iv) conduct monitoring and evaluation. Implementation of Component 3 will be undertaken jointly by the WoLAU, the KLAUC, and the Land Administration and Use DAs. In addition, the project will contract technical advisors for specific outputs, such as preparation of MYDPs and WMUPs, establishment of WUAs, and development of business plans for IGAs and value chain linkages.

5. At the federal and regional levels, the SLM Program is guided by National and Regional SLM Steering and Technical Committees. MoUs will be signed between MoALR and the Regional BoAs for implementation of the project, defining each Region's contribution to the project's objectives. The National and Regional Steering Committees will oversee execution of annual work plans and achievement of results defined in the MoUs. At the regional level, the Regional BoAs will lead implementation of the project, reviewing and consolidating annual work plans, budgets, procurement plans and progress reports submitted by the participating woredas.

Project Administration Mechanisms

Federal Level

6. As in the case of SLMP-II, MoALR, working closely with other relevant sector ministries including MoFEC and MoWIE, will lead the coordination, supervision and implementation of the project. The existing institutional mechanisms already established to provide oversight and policy direction and to coordinate all projects and initiatives on SLM financed by the GoE and development partners will be continued. These are the Rural Economic Development and Food Security (RED&FS) Platform, National SLM Steering Committee, National SLM Technical Committee and the SLM Project Coordination Unit – all hosted at MoALR.

7. *The Rural Economic Development and Food Security (RED&FS) Platform*, chaired by the Minister for Agriculture and Natural Resources, has high-level representation, including from MoFEC, MoWIE, MEFCC and development partners supporting mainstream agriculture, food security and disaster risk management. RED&FS is serviced by a secretariat comprising a MoALR staff and a coordinator hired and financed by DPs. Under the RED&FS platform are three federal level committees namely the SLM Technical Committee, Agriculture Technical Committee and Disaster Risk Management and Food Security Technical Committee.

8. *The National SLM Steering Committee*, chaired by the State Minister for Natural Resources Management in MoALR, comprises high level representation from MoFED, MoWIE, MEFCC and Development Partners. The Steering Committee is responsible for the following tasks in the SLM project: (a) providing policy guidance, oversight and overall supervision for project implementation; (b) reviewing and approving the consolidated annual work plan, budget and procurement plan; (c) reviewing and approving the annual implementation performance report, and overseeing the execution of any corrective actions that may be designed.

9. *The National SLM Technical Committee* is also chaired by the State Minister for Natural Resource Management in MoALR. It is made up of senior technical staff from institutions such as MoALR, MoWIE, MoFEC, MEFCC, the Ethiopian Institute for Agricultural Research (EIAR), development partners supporting SLM projects or initiatives, and civil society organizations (non-governmental organizations) actively engaged in SLM activities. Generally, this body is responsible for providing technical advice to MoALR on SLM. Specific to RLLP, this Committee will provide technical advice on the quality of implementation performance reports and special studies such as policy and legislative drafts, financial and audit reports, documentation of best practices, and M&E reports.

10. *The SLM* PCU at MoALR will continue to play the role of managing and facilitating the day-to-day implementation of the project. Specific tasks will include: (a) consolidating regional annual work plans, budgets and procurement plans; (b) facilitating and supervising implementation of work plans and corrective actions, safeguards instruments including management/mitigation plans; (c) processing and procuring works, goods and services; (d) monitoring overall implementation progress, safeguards instruments (and management/mitigation plans) and evaluating project impacts; and (e) preparing progress reports. The Unit will maintain a team of experts including a National Project Coordinator, procurement and financial management specialists, M&E expert and technical experts in diverse disciplines (e.g., watershed management, agronomy, forestry/agroforestry, land administration/land use planning, knowledge management & communication, livelihoods, private sector development, etc.).

Regional and Zonal Level

11. Implementation of activities on the ground is supported by, among others, Regional steering and technical committees. MoUs will be signed between MoALR and the Regional BoAs for implementation of the project, defining each Region's contribution to the project's objectives. The National and Regional Steering Committees will oversee execution of annual work plans and achievement of results defined in the MoUs. The Regional BoAs will lead implementation of the project, in close collaboration with relevant public institutions. Serving as the link between the federal, zonal and woreda institutions, the BoAs will review and consolidate annual work plans, budgets, procurement plans submitted by the woredas. It will also review and approve implementation progress reports (including M&E, financial, audits, safeguards, etc.) originating from the woredas. The project will finance a project coordinator, M&E expert, accountant and procurement officer per region to assist the BoA and WoANR to implement the project on a day-to-day basis. At the zonal level, the Zonal Agriculture Office (ZAO) will provide technical support, extension services and M&E to a group of woredas under its jurisdiction. The ZAOs will coordinate with the WoANRs to discharge their responsibilities enshrined in the MoU. Moreover, RLLP shall provide opportunities to zonal implementing entities to participate in the implementation of activities, draw lessons from the project and support scaling up of SLM practices to wider landscapes. In addition to the existing government staff, RLLP will contract technical advisors for specific outputs (such as preparation of MYDPs and WMUPs, establishment of WUAs, and preparation of business plans for IGAs and value chain linkages) in 29 zones where SLMP-I, II, and RLLP will be implemented.

Woreda and Kebele Levels

12. On-the-ground planning and execution of activities under the project will be undertaken jointly by the WoANR, the KWT, Development Agents (DAs) and communities. At the woreda level an SLM core team is responsible for, among others:

- participating in the selection and prioritization of community watersheds in the woreda;
- organize orientation and training of DAs in watershed planning and implementation issues, including follow-up and on-the-job training;
- preparation of information kits and teaching aids;
- assist DAs during watershed MYDP preparation, and review of MYDP implementation;
- prepare woreda-level aggregated watershed plans, and use of watershed plans for upgrading of woreda strategic plans.

Additionally, according to the Community Based Participatory Watershed Development Guideline (CBPWDG), the Woreda SLM core team shall have the following responsibilities:

- Prepare proposals for linkages/synergies with other institutions, for example health and education;
- Ensure timely result-based monitoring using participatory approaches, and yearly review of watershed MYDP implementation progress by DAs and communities;
- Assist in proper documentation, dissemination and networking of watershed development activities and integrate family planning with watershed development.

WoANRs, KWTs and DAs will assist communities in:

- developing annual work plans and budgets as well as procurement plans for submission to the BoAs for review and endorsement and integration into the region's annual work plans and budgets;
- facilitating and mobilizing community participation in watershed planning and rehabilitation;
- undertaking awareness campaigns and training;
- participatory monitoring and evaluation;
- extension service delivery and dissemination of new practices and technologies; and,
- for watersheds graduating from project-based support, the establishment of WUAs and preparation of forward-looking Watershed Management and Use Plans (WMUPs)

Implementation of Component 3, Rural Land Administration and Use, will be undertaken jointly by the WoLAU through the Kebele Administration Offices, the KLAUC, the Land Administration and Use DAs, and the communities.

Community Level

13. CWTs are responsible for the implementation of the watershed MYDPs developed in a participatory manner by the community, DAs and the Woreda SLM core team. According to the Community-based Watershed Development Guidelines (CBWDG), each CWT is composed of four male-headed households, four female-headed households, one youth group representative, one religious representative, and any other respected people or group. The committee should comprise five women out of ten. The committee shall have duties to: i) serve as a permanent contact with the DAs, the rest of the community/target group and local leaders during planning, implementation and monitoring and evaluation; and ii) be responsible to ensure liaison with other communities located within the broader watershed unit. The CWT should have a meeting once every two weeks. The CWTs are elected from the community and representing all households found or located in the micro watersheds. The CBPWDG suggests that election should be conducted annually to allow different people to become responsible for the program, check unnecessary leadership ambitions as well as to generate new ideas for improving implementation.

Financial Management

14. The Bank Financial Management team conducted a Financial Management (FM) assessment of the MoALR for the implementation of the project. The FM assessment was conducted in accordance with the World Bank Financial Management Practices Manual issued on March 1, 2010 and Financial Management Policy, Bank Policy and Bank Directive on Investment Project Financing (IPF) as well as the Financial Management Manual for World Bank-Financed Investment Operations issued by the FM Sector Board, retrofitted on February 4, 2015. The assessment also covered sampled implementing entities at the federal and regional levels as well as selected Woredas.

15. The FM arrangements for the proposed project will be based on the existing FM systems and structures established under SLMP II. The Federal PCU based at the MoALR will retain the overall fiduciary responsibility for the implementation of the project supported by Regional Coordination Units in the six Regional BOA's and all the implementing woredas. Project annual budgets will be prepared based on consolidated annual work plans initiated at the woreda and regional levels and compiled at the federal level. The lessons learnt under SLMP-II include the need to reduce delays in preparation and approval of the budget, and weaknesses in the system of budgetary control. Under RLLP, additional effort will be put in ensuring that the project budgeting systems are

fully aligned with the GoE budget calendar resulting in early preparation and notification of budgets to regions and woredas. Mechanisms for monitoring execution of the approved budget will also be strengthened using acceptable computerized accounting software.

16. The proposed project will also retain the existing accounting system and capacity for SLMP II which has been assessed as adequate. This capacity will however be enhanced through recruitment of a Senior Financial Management Specialist at the federal level and deployment of accountants to fill the vacant positions all the woredas implementing RLLP. Peach Tree accounting system or other acceptable computerized accounting system will continue to be used at the Federal PCU and the regional level to ensure efficiency in transaction processing and timeliness in financial reporting. Some of the weaknesses identified under SLMP-II were delayed update of financial records at the woreda level and maintenance of a manual accounting system which is prone to error. As a result, each woreda will install an acceptable computerized accounting system to facilitate accurate and timely financial reporting at the end of each quarter. Since most woredas were noted to be using the Government-implemented Integrated Budget and Expenditure (IBEX) system, this will be considered for use under the project with additional configuration/customization. The FM manual will be finalized within one month of project effectiveness and incorporated into the PIM, reflecting design and implementation arrangements for the RLLP while addressing lessons learnt under SLMP-II.

17. Similarly, the proposed project will build on the internal control arrangements established under SLMP-II, addressing the weaknesses noted at the regional and woreda levels, including weak internal audit oversight, non-compliance with the established payment approval and authorization arrangements, weaknesses in control of advances and failure to maintain up-to-date assets registers. Project resources will be ring-fenced from the wider fiduciary risks in the implementing entities by ensuring segregated project accounts (Designated Accounts), cashbooks and financial statements, operated, maintained and prepared by the PCUs at federal and regional levels, and the Woreda Offices of Finance and Economic Development. Under Component 1, the proposed project is expected to make small value decentralized payments at the community level, which carries inherent high risk. The current practice is that beneficiaries sign daily attendance sheets administered by the Bureau of Agriculture officials. At the end of the month, the attendance sheets are then compiled into payrolls by the respective project accountants and used to make payment to the beneficiaries. Identification of beneficiaries is based on name and signature as reflected in the attendance sheets and payroll. This system will be strengthened by inclusion of the woreda identification number in both the attendance sheets as well as the payroll. During payment, beneficiaries will be required to produce woreda identity cards for identification while payments will be acknowledged by signature on the payroll.

18. Other measures that will be applied to strengthen internal controls over community-level payments include discussion of SLM work plans and budgets at annual woreda budget meetings and ensuring that all payments are duly supported by relevant documentary evidence including signed payment sheets and certificate/confirmation of work completed. Fiduciary oversight arrangements will also be strengthened through enhanced supervision of woredas by regional accountants at least once every quarter, regular risk-based internal audit of the project by federal and regional auditors and bi-annual Bank FM supervision reviews. Further, there will be independent confirmation (of works and payments) on a sample basis by the Offices of Regional Auditor Generals (ORAGs) and other organizations in addition to annual external audit of project activities at the end of the financial year. Under SLMP-II, internal audit oversight has been enhanced through quarterly audit of sampled regions and woredas by the federal internal auditor and these arrangements will continue under the proposed RLLP. In addition, the project will implement enhanced social accountability

mechanisms including display of project information in public places and strengthening systems for reporting grievances and complaints.

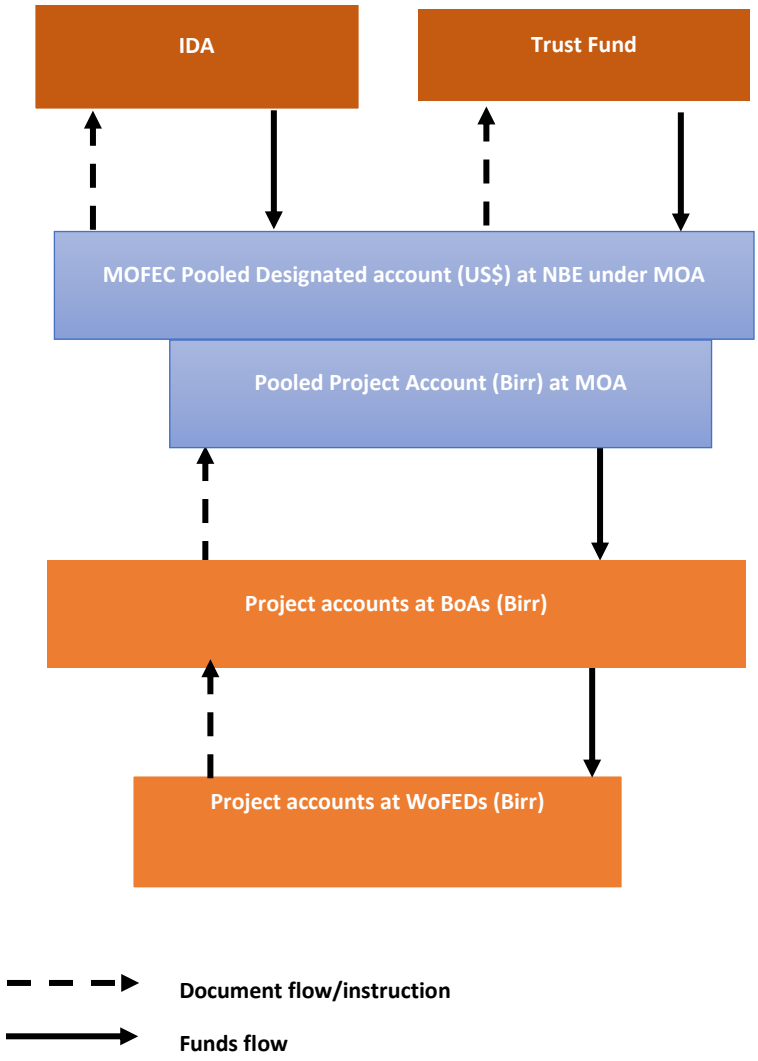
19. The project will prepare and submit quarterly unaudited Interim Financial reports (IFRs) in form and content acceptable to the Bank. The quarterly IFRs will be submitted within 60 days after the close of the quarter. The contents of the IFRs will, as a minimum, consist of the Statement of Sources and Uses of Funds, Statement of Uses of Funds by Category, Statement of Cash Forecasts, Statement of Designated Account, explanatory notes to the IFR and supplementary or supporting schedules. Disbursements will be based on the quarterly IFRs submitted to the Bank together with six months' cash forecasts. The quarterly IFRs will also be used to monitor the financial performance of the project including progressive absorption of the approved annual budget and the level of disbursement of the IDA Credit.

20. The project in coordination with the Office of Federal Auditor General (OFAG) will ensure selection of the project auditor based on procedures set out in the PIM. The project will prepare annual financial statements which will be submitted for external audit within 3 months after the financial year end. Annual audit of project financial statements will be conducted in line with the International Standards on Auditing and the audit report and management letter submitted to the Bank within 6 months after the financial year end. The audit report will be disclosed to the public in line with the Bank Access to Information Policy which became effective on July 1, 2010. In addition, as part of the project financial audit, the project will have an interim audit conducted, and will submit to the Bank an interim audit report on internal control/compliance weaknesses noted during the course of the financial year. The Terms of Reference (TOR) for both interim as well as end-year audit will be cleared by the Bank before commencement of audit. The project will ensure prompt action is taken on the recommendations of external audit reports and management letters. Based on the above, the FM risk rating for the implementation of the proposed project is considered Substantial.

Table 1: FM Action Plan

	Action	Date due by	Responsible
1	Revise the FM Manual to incorporate new developments and address weaknesses noted	In PIM, one months after effectiveness	MoALR-RLLP Support unit
2	Streamline budget preparation process where government budget calendar will be used to align project working budget with the budget sent to MOFEC	Ongoing	MoALR-RLLP Support unit
3	Enhance internal control over advances, fixed assets and payments. Strengthen internal audit oversight	On going	MoALR-RLLP Support unit
4	***Staffing, Training & Support to Regions &Woredas***: 1. Recruitment of (a) a Senior FM Specialist for Federal PCU and (b) deployment of accountants in all Woredas; 2. Conduct planned support & supervision visits to regions and Woredas including by providing feedback to the visited entities; 3. Regular training to strengthen staff capacity-Training on project accounting in general (FM manual), budget analysis, IFR preparation, preparing bank reconciliation, accounting software, etc.to be offered Woreda accountants	1. (a) before effectiveness, and (b) before disbursements to woredas 2. Quarterly 3 (a) Initial training within 2 months after approval of FM manual by Bank. 3 (b) Subsequent training ongoing at least once a year	MoALR and BoA and Woredas
5	***Audit issues*** 1. Recruitment of external Auditors at early stages of the project; 2. Project annual financial statements will be prepared on time and strict follow up on timely closure of accounts will be made. 3. Submission of annual audited financial statements and audit report including the management letter; 4. Submitting interim audit report on internal control/compliance weaknesses noted during the midyear 5. MoALR will submit the Government's response to the findings in the annual audit report to Bank and an action plan for any follow-up actions. 6. Disclosure-In accordance with Bank Policy, (a) the Bank requires that the borrower disclose the audited financial statements in a manner acceptable to the Bank; (b) following the Bank's formal receipt of these statements from the borrower, the Bank makes them available to the public in accordance with The World Bank Policy on Access to Information.	1. Based on procedures set out in PIM 2. Within 3 months of year end, as specified in PIM 3. within 6 months of the end of each fiscal year, as specified in PIM; 4. within 90 days of the 2nd quarter end date (January 7), as specified in PIM. 5. within 2 months of submission of the audit report to the Bank, as specified in PIM 6. Annually, as specified in PIM	1 to 5-MOALR-RLLP Support unit 6 a. MoALR or MoFEC 6b. WB
6	***Disbursement*** Open US$ DA and segregated local currency project accounts at federal, regional and woreda levels	Before initial disbursements	MoALR /MoFEC
7	IFR Formats and audit ToRs agreed	Agreed during negotiation of IDA financing	MoALR/WB

Figure 1: Funds Flow Arrangements



Disbursements

21. For purposes of disbursements, the project will open a pooled US$ Designated Account at the federal level alongside a project account denominated in local currency in the National Bank of Ethiopia. Each of the federal level-implementing entities, the six regions and all woredas will maintain segregated local currency bank accounts in a commercial bank acceptable to IDA, where project funds will be deposited and from which payments will be made. Proceeds of the IDA Credit will initially flow into the Designated Account before further disbursement into each of the local currency project accounts based on the approved annual work plan and budget (see Figure 1 above). The project will follow the advance/report-based disbursement method. An initial advance will be made to the Designated Account upon submission of a Withdrawal Application (WA)

accompanied by a six-months cash forecast. Subsequent disbursements will be based on the quarterly IFRs submitted to the Bank within 60 days after the end of the quarter. In addition to receiving advances through the Designated Account, the project may use other disbursement methods such as reimbursements, direct payment and special commitment. In order to enhance the level of disbursements under the new project, the team will ensure prompt submission of quarterly IFRs immediately after the end of each quarter. Once reviewed and cleared by the Bank, the project will also ensure timely submission of WA's to the Bank through client connection. Detailed disbursements arrangements are contained in the Disbursement and Financial Information Letter (DFIL).

Procurement

Applicable Procurement Regulations

22. Procurement under the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers - Procurement in Investment Project Financing, Goods, Works, Non-Consulting, and Consulting Services', dated July 1, 2016 and revised November 2017; 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', revised as of July 1, 2016; and the provisions stipulated in the Legal Agreement. Use of Alternative Procurement Arrangements (APA) was not considered as there is no confirmed cofinancing by other multilateral or bilateral organizations and the procurement rules and procedures of the implementing agencies are not adequate for international procurement procedures.

23. When approaching the national market, as agreed in the Procurement Plan, the country's own procurement procedures may be used. Requirements for national open competitive procurement include the following:

a) open advertising of the procurement opportunity at the national level;
b) the procurement is open to eligible firms from any country;
c) the request for bids/request for proposals document shall require that Bidders/Proposers submitting Bids/Proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the Bank's Anti-Corruption Guidelines, including without limitation the Bank's right to sanction and the Bank's inspection and audit rights;
d) contracts with an appropriate allocation of responsibilities, risks, and liabilities;
e) publication of contract award information;
f) rights for the Bank to review procurement documentation and activities;
g) an effective complaints mechanism; and
h) maintenance of records of the Procurement Process.

24. Standard Procurement Documents issued by the World Bank to be used by borrowers for IPF-financed projects which include the General Procurement Notice, Specific Procurement Notice, Request for Expression of Interest, Request for Proposals, and Request for Bids documents, will be used for works, goods, consulting, and non-consulting services to be procured through international competitive procurement. For Procurement involving national competitive Procurement, the Borrower may use its own Procurement Documents, acceptable to the Bank, with the addition of the Bank requirements for national bidding.

25. Other national procurement arrangements (other than national open competitive procurement) that may be applied by the borrower (such as limited/restricted competitive bidding, request for quotation/shopping, direct contracting), shall be consistent with the World Bank's core procurement principles and ensure that the World Bank's Anticorruption Guidelines and Sanctions Framework and contractual remedies set out in its Legal Agreement apply. The Bank's procurement regulations applicable to the project are guided by the core procurement principles of value for money, economy, integrity, fit for purpose, efficiency, transparency, and fairness.

26. The Borrower's procedure is accepted for "national" and "other national procurement arrangements" except for the application of reservation and preference schemes for MSEs established by public bodies by registering job-seeker youth groups as it reduces the participation of non-MSE individuals/firms of similar size and capacity.

27. As per the requirements of the Regulations, a PPSD has been prepared by the MoALR, which includes a Procurement Plan for the first 18 months of the project life. The procurement plan is prepared based on the PPSD and sets out the selection methods to be followed by the Borrower during project implementation in the procurement of goods, works, non-consulting and consulting services financed by the Bank. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

28. **Systematic Tracking of Exchanges in Procurement (STEP)**. The project will implement STEP, a World Bank planning and tracking system, which will provide data on procurement activities, and establish benchmarks. The details of the procurement activities in the 18-month procurement plan will be transferred to the STEP system.

29. Procurable Items under the project will include works, goods and non-consulting services and consultancy services. Procurement of Goods under this project will include but is not limited to vehicles and motor bicycles with field kits, office equipment, plotters and scanners, land administration materials (GPS, augur, clinometer, leveling instruments), tablet computers, server computer workstations, computers with UPS, farm tools, gabion boxes, land certification materials, water pump and generators, office furniture, office supplies (stationary, maintenance and tire and inner tube), livestock, beehives, improved seeds, fruit seeds and seedlings, forest seeds, limestone for acidic soil, and community driven materials (stone, sand, fence materials, etc.). Procurement of works under this project will include but is not limited to small scale constructions and infrastructures, construction of water harvesting structures, construction and rehabilitation of community access roads, gully treatment, etc. Procurement of Consulting Services under this project will include but is not limited to use of consultant services for training, technical assistance, and other capacity-building activities, PCU Staff, baseline study consultancy services for new woredas, small consultancy services (financial audit, procurement audit and others), and individual technical assistance at various levels of project implementation and advisory services to be provided by firms in various aspects of the project as described in the Project Procurement Plan; Procurement of Non-Consulting Services under this project will include but is not limited to Ortho-photo production, satellite imagery and its quality control mechanism, transportation of goods and equipment, public sensitization via mass-media, etc.

30. Goods and works required under Community demand driven initiatives may be procured by shopping and or other methods under Community Participation as will be detailed in the Project Implementation Manual.

Implementation Arrangements

31. **Federal Implementing Agencies**: The MoALR is the lead and focal procurement implementing agency of the project. The Bureaus of Agriculture and/or Pastoral Development Agencies and the Woreda Agricultural Development Offices in the six regions (Amhara, Tigray, Oromiya, SNNP, Gambela and Benshangul Gumuz National Regional States) are also the procurement implementing agencies of the project in the respective regions and woredas and are responsible to implement the procurement activities allocated to them in the consolidated procurement plan. MoALR and BoANRs will have Federal and Regional PCUs respectively to coordinate their respective procurement activities.

32. While, as a lead agency, the primary responsibility for the successful implementation of the project will rest on MOALR, the support and close involvement of the regional and woreda level implementing agencies is also crucial. Each implementing agency will prepare its own procurement plan, to be updated in line with annual work plans. The MoALR shall aggregate and consolidate the annually-updated procurement plans of all implementing agencies and identify which level of administration is best placed to conduct which procurement. MoALR in addition to its own procurement shall aggregate and procure strategic and specialized procurements, such as major and common-user consultancy services, vehicles and other equipment on behalf of other implementing agencies. After aggregation and consolidation, open international and national competitive procurement shall be conducted by MoALR. Open national competitive procurement may be carried out by regional implementing agencies. Woreda level implementing agencies may conduct procurement based on Request for Quotations/Shopping and Consultant's Qualification-based Selection for small consultancy services assignments. Limited/Restricted and Direct Selection Procurements (in special circumstances as per approved procurement plans, eg. for one-off and unforeseen type of both very low value and low risk procurement items) may be carried out at all levels.

33. At regional level, the finance, procurement and property administration process units of Regional Agricultural and Natural Resource Bureaus aggregate annual procurement plans after collecting annual procurement requirements from themselves and all woredas in their respective regions. At woreda level, the finance, procurement and property administration process units of the Woreda Offices of Finance and Economic Development aggregate annual procurement plans after collecting annual procurement requirements from the sector offices.

34. Considering the capacity limitations of the implementing agencies, establishment of PCUs at federal and regional levels is considered mandatory for the proper execution of the project. However, the procurement activities of the project at federal, regional and woreda levels will be implemented within the existing structure of the procurement function of each implementing agency. The role of the PCUs is to assist, support, participate, coordinate and build the capacity of the procurement units of the implementing agencies. The procurement and contract management specialists assigned in each PCU shall work under the supervision of the heads of the respective procurement units and the project implementation unit coordinators on their day to day procurement functions. The mobile procurement specialists at regional level will also support and coordinate all the procurement activities at woreda levels to smoothly implement the project procurement rules and regulations in harmony. The procurement and contract management specialists will be responsible to train and build the capacity of the procurement and contract management officers within the procurement functions of their respective implementing agencies.

Procurement Capacity Assessment

35. RLLP utilizes the same implementing agencies and structure as SLMP-II except for the new 17 woredas. Hence, the Procurement Capacity Assessment of the existing implementing agencies (MoALR, BoANRs and 135 woredas) was based on assessment of existing progress and audit reports. The Procurement Capacity Assessment (PCA) for the 17 new woredas included physical visits and assessments on sample basis. The procurement capacity and risk assessment for the proposed Program at woreda level has been carried out for two woredas in each of SNNP, Amhara and, Oromia Regions and one woreda in each of Tigray, Benishangul Gumuz and Gambella Regions. The procurement capacity and risk assessment includes applicable procurement systems, proclamations, directives, rules, manuals and procedures, procurement processing, complaint handling and oversight mechanisms at the program implementing agencies. The PCA was carried out in April and May 2018 including field visits to the sampled woredas conducted between 25th April and 7th May, 2018 by three Procurement Specialists of the Bank.

36. Under SLMP-II most planned procurements were completed, even if some delays were recorded. All stakeholders of the project have made significant efforts for timely completion of planned procurement activities. Procurement of essential goods and equipment, for instance vehicles, motorcycles, field equipment, office equipment and furniture, software and other accessories for all implementing agencies were carried out and strengthened project management. A number of consultancy service procurements were conducted to support the project.

37. It has been noted that the procurement capacity of the implementing agencies is still limited even though improvement has been shown in SLMP-II, particularly regarding procurement processes for ICB contracts. For example, the procurement of vehicles under SLMP-II was substantially delayed, demonstrating that timely initiation of major procurement for ICB goods contracts is crucial to use these goods for the project's intended purposes. In addition to this, organized procurement capacity building training for all implementing agencies is necessary to have effective and efficient procurement transaction at all levels during project implementation. It has been noted that no adequate procurement capacity building training was given for procurement specialists who were working under SLMP-II. In SLMP-II, the mission noted some procurement management challenges, which include: lack of procurement specialists at the woreda and two regional levels, high staff turnover due to low salary and benefit packages. Further, there is inadequate involvement of procurement staff and units of the implementing agencies and inadequate involvement of relevant technical and experienced staff in bid evaluations. Among other things, lack of timeliness and timely approval of procurement documents by the endorsing committee of the agencies has been a concern – a sense of ownership of the project is a critical issue to be resolved in RLLP. The Independent Procurement Audit conducted in 2017 for the period from 1st October 2013 up to 31st December 2016, revealed that there were still serious shortcomings in the procurement activities carried out by the implementing agencies at all levels, i.e., federal, regional and woreda.

38. A summary of the risks to procurement under RLLP, as well as the proposed procurement capacity-enhancement measures to mitigate the risks, is presented in the Table 2.

Table 2: Summary of Procurement Assessment Findings and Actions (Risk Mitigation Matrix)

No.	Major findings/issues	Actions proposed	Resp.	Targeted date
1.	Inadequate market price study, analysis and updating system, Incomplete procurement plans, Incomplete evaluation criteria in the bidding documents; rejecting majority of bidders in bid evaluation without confirming that the deviations were material, changing the payment modality significantly at award, awarding contracts beyond bid validity period, poor contract management practice (not confirming final delivery and acceptance of goods), not awarding contracts to the lowest evaluated bidder, conducting direct procurement without sound justification, awarding contracts to SOEs without confirming eligibility, incomplete bid evaluations, awarding a contract to a bidder whose name was not in the invited list, incomplete bidding documents, not following approved procurement plans, issuing variations without adequate justifications, rejecting bidders for not falling within a given range of weighted average of estimated pre-tender price and average bid prices, and poor procurement record system.	(i) As part of the PIM, a comprehensive step-by-step procurement implementation manual shall be prepared for use of staff. The procurement operations manual should include measures to address all the shortcomings/issues identified. The manual should also include Procurement and contract management reporting format, the need for quarterly procurement and contract management reporting, provision not to exclude non-MSE (Micro and Small Enterprise) individuals/firms from competition, provision to avoid any form of exclusion of bidders from competition through bracketing based on engineer's estimate and average bid prices. The Procurement Implementation Manual should outline the procedures and circumstances under which community participation in procurement is feasible. (ii) Provide intensive procurement and contract management training (goods, works, consultancy and non-consultancy services) to procurement and contract management staff, procurement endorsing committee members and User Section Staff	(i) MoALR (ii) MoALR/ WB	(i) Within one month of project effectiveness (ii) At project start-up and as required thereafter.
2.	Lack of office supplies/equipment, procurement data management system and procurement record facilities	All the implementing agencies should secure adequate office supplies/equipment and procurement record space and system. The procurement and contract management specialists will be provided with laptop computer, desktop computer, printer and scanner, office telephone and mobile card including required office furniture and facilities. WiFi, CDMA and broadband internet access is necessary as the procurement and contract management specialists use STEP for each procurement activity which very much requires internet access.	MoALR	Included in project procurement plan

No.	Major findings/issues	Actions proposed	Resp.	Targeted date
3.	The number, qualification and experience of procurement and contract management staff was not considered adequate. A high staff turnover due to low payment.	(a) Two Procurement and Contract Management Specialists at federal level (MoALR) and (b) one Procurement and Contract Management Specialist at regional level (each BoANR) and one mobile Procurement and Contract Management Specialist to be stationed at regional level (each BoANR) to assist and build the capacity of the respective Woreda implementing agencies. The Specialists shall be selected following the WB Individual Consultant Selection (ICS) procedures with competitive market rates. The Specialists should have adequate qualification and experience on public procurement in general and WB procurement procedures.	MoALR	(a) as a condition of project effectiveness and (b) within three months of project effectiveness
4.	Lack of Independent internal and external procurement audit System	• Internal audit units should be strengthened to conduct procurement audit • The Bank will conduct PPR by its own and/or the project will finance for the Bank to use Auditor Generals or for the Borrower to engage Independent Procurement Audit Consultant.	MoALR/ WB	At least Annually
5.	Risk of Fraud and Corruption:	The Government commits to use the Bank's debarment list to ensure that persons or entities debarred or suspended by the Bank are not awarded a contract under the project during the period of such debarment or suspension. The Procurement Manual should state that all bidding documents should include provision that all Bank debarred and suspended firms are not eligible for award of Bank financed contracts.	MoALR	PIM to be finalized within one month of project effectiveness.
6.	Regional Governments issue ad-hoc directives to reserve procurements of all categories (works including bridge works, goods and consultancy services) up to a substantial threshold (US$ 350,000 in the case of works for Amhara Region) for Youth groups called "MSEs" that are registered by the concerned public bodies as jobless. Governments lack a harmonized procedure to register, follow up, monitor and graduate the MSEs from the reservation schemes	Non-MSE Individuals/firms of similar capital and capacity who didn't initially get registered as job seeker and got their first job by their own means should not be excluded from competition	MoALR/ All imp. agencies	Entire project period.

Procurement Oversight and Monitoring Arrangements

39. The World Bank exercises its procurement oversight through a risk-based approach comprising prior and post reviews, and independent review as appropriate. The World Bank sets mandatory thresholds for prior review for the proposed project based on procurement risk levels of the project. Based on the risk rating at appraisal of the project, the World Bank agreed with the Borrower that procurement above the applicable thresholds as provided in the table below shall be subject to prior review. Such procurements shall use the World Bank's Standard Procurement Documents. The World Bank shall carry out post-reviews of procurement processes undertaken by the Borrower to determine whether they comply with the requirements of the Legal Agreement. The Bank may use a third party such as a supreme audit institution, acceptable to the Bank, to carry out post reviews. Any such third party shall carryout the reviews in accordance with the terms of reference (TOR) provided to it by the Bank. Alternatively, the Bank may require the Government to select and appoint a procurement auditor, acceptable to IDA, to carry out annual independent procurement audits of the project and shall submit the report to IDA annually, six months after the end of the fiscal year for its consideration.

40. Based on the initial risk rating, which is high, the prior review thresholds are provided in the table below. The prior review thresholds will be updated based on risk levels to be updated from time to time.

Category	Prior Review Thresholds (US$, millions)
Works	≥ 5.0
Goods, IT, and non-consulting services	≥ 1.5
Consultants (Firms)	≥ 0.5
Individual Consultants	≥ 0.2

41. As an exception, an activity/contract below the applicable mandatory thresholds shall be subject to prior review if the Bank determines that the activity/contract has risks such as procurement arrangements that are inherently risky, such as procurement that includes the use of negotiations in a competitive procurement process for Goods, Works and Non-Consulting Services, BAFO, Competitive Dialogue, and the application of sustainable procurement. Furthermore, the TORs for post review consultancy services shall be cleared by the Bank. If the assessed activity/contract level risk is low or moderate, the Bank may determine that procurement above the applicable thresholds shall be subject to post review, and be included in the Procurement Plan.

42. All contracts at or above the mandatory procurement prior review thresholds are subject to international advertising and the use of the Bank's SBDs (or other documents agreed with the Bank).

43. **Dated covenant**: A procurement manual as part of the PIM shall be prepared and submitted to the Bank within one month of project effectiveness.

Procurement Arrangements

44. The procurement arrangements for the high or substantial risk and relatively high value contracts of the project are provided in the table below.

Contract Title, description and category	Estimated cost US$ and risk rating	Bank oversight	Procurement approaches/ competition	Selection methods	Evaluation methods
Office equipment (Lot 1-computers, Tablet computers, Server, workstation computer with UPS; Lot 2- printers, photocopy machines scanners; Lot 3: (smart phones)	3,322,172 (high)	Prior	Open International	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Vehicles and motor bicycles	3,135,767 (high)	Prior	Open International	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Land Administration Materials (total station, GPS, Clinometers, Auger, Plotters)	344,198 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Acidic soil treatment materials and lime	305,716 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Office furniture (Tables, Chairs, etc.) for NPSU, RPSU and Woredas	409,297 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Stationary for NPSU, RPSU and Woredas	483,570 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Forest, vegetables and fruit seed	756,605 (substantial)	Post	Open National/Direct Selection	Request for Bids/Direct Selection	Most Advantageous Bid (Lowest Evaluated Cost (LEC))/Direct Selection
Agricultural hand tools	873,855 (substantial)	Post	CDD	CDD	CDD
Water pumps	685,740 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Land certification materials	529,500 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Nursery tools (Hand tools)	414,642 (substantial)	Post	CDD	CDD	CDD
Tire and inner tube for vehicles	285,200 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))
Gabion for terracing	892,423 (substantial)	Post	Open National	Request for Bids	Most Advantageous Bid (Lowest Evaluated Cost (LEC))

Contract Title, description and category	Estimated cost US$ and risk rating	Bank oversight	Procurement approaches/ competition	Selection methods	Evaluation methods
Livestock (Chicken, bee, cattle)	544,430 (substantial)	Post	CDD	CDD	CDD
Aerial photo, Ortho-photo production and satellite imagery	886,430 (substantial)	Post	Direct Selection	Direct Selection	Direct Selection
Water harvesting and community access road (Roof water harvesting, Shallow well, rope and washer, household pond, spring for development and lifting water with pump) (in different watersheds)	1,700,000 (substantial)	Post	CDD	CDD	CDD
Knowledge management and best practice consultancy service	500,000 (high)	Prior	Open International	QCBS	Most Advantageous Proposal (Rated criteria (VfM))
Biophysical Impact Evaluation Services by WLRC	1,000,000 (high)	Prior	Direct Selection	Direct Selection	Direct Selection
CSA Impact Evaluation Services by CGIAR	1,000,000 (high)	Prior	Direct Selection	Direct Selection	Direct Selection
Impact Evaluation Synergies and Policy Recommendation Services by EDRI	200,000 (high)	Prior	Direct Selection	Direct Selection	Direct Selection
Financial Audit for 5 years 5 times	95,000 (substantial)	Post	Open National	CQS	CQS
Independent Procurement Audit	150,000 (substantial)	Post	Open National	CQS	CQS
Publication and public sensitization for project areas-A number of individual procurements	450,000 (substantial)	Post	Open National /Limited	Request for Bids/Request for Quotations	Lowest Evaluated Cost (LEC)
Individual consultant for project management services - A number of individual consultancy service procurements	8,372,835 (substantial)	Post	Open	ICS	ICS

Environmental and Social (including safeguards)

45. *Safeguards Management Approach*: The RLLP will build on the Environmental and Social Safeguards wealth of technical, operational, institutional experience and lessons learnt through the implementation of the GoE's SLM Program, including the Bank-financed SLMP-I and SLMP-II. RLLP implementation will be centered in the MoALR which will be responsible for project implementation at federal, regional, zone, woreda (district), and kebele (sub-district), as shown in Figure 2 below. These entities and their staff are generally capacitated and ready to implement in the existing 135 SLMP-II woredas in Oromia, Amhara, SNNP, Tigray, Benishangul Gumuz and Gambella regional states. The new 17 woredas will require a start-up period of capacity building and mobilization of community institutional capacity to implement safeguards. The project at the federal and regional levels will have an Environmental officer and Social Development & Safeguards officer who will coordinate and follow-up with the preparation of the required site-specific safeguards instruments, monitor safeguards due diligence and quarterly report during implementation.

46. *National Project Coordination Unit (NPCU)*: will retain/recruit one Environmental and one Social Development (Social Safeguards and Gender) Specialists at the national level. The environmental and the social safeguard specialists will work closely with regional safeguard specialists, zonal and woreda focal persons. They will assist in (i) monitoring the effective implementation of the Environmental and Social Management Framework (ESMF), Social Assessment (including the Social Development Plan), the Resettlement Policy Framework and the Gender Action Plan, (ii) provide the required technical backstopping, review subproject and activity plan, design, cost, and baseline documents to ensure environmental factors and mitigations, (iii) prepare monthly and annual work plans, collect and consolidate progress report and quarterly submit to the World Bank and other development partners.

47. *Regional Project Coordination Unit (RPCU)*: the RPCU will maintain/recruit one environmental and one *social* safeguard (Social Safeguards and Gender) specialists to (i) monitor implementation of the ESMF, RPF, SA and gender action plan; (ii) conduct capacity building on environmental and social safeguards aspects of subproject preparation, review and approval; (iii) closely work with the regional infrastructure specialists of the region during the planning and construction phase to avoid the late occurrence of impacts on the environment and the community; (vi) collect the performance of safeguard activities from the woreda; and (v) review and submit a consolidated plan to the NPCU.

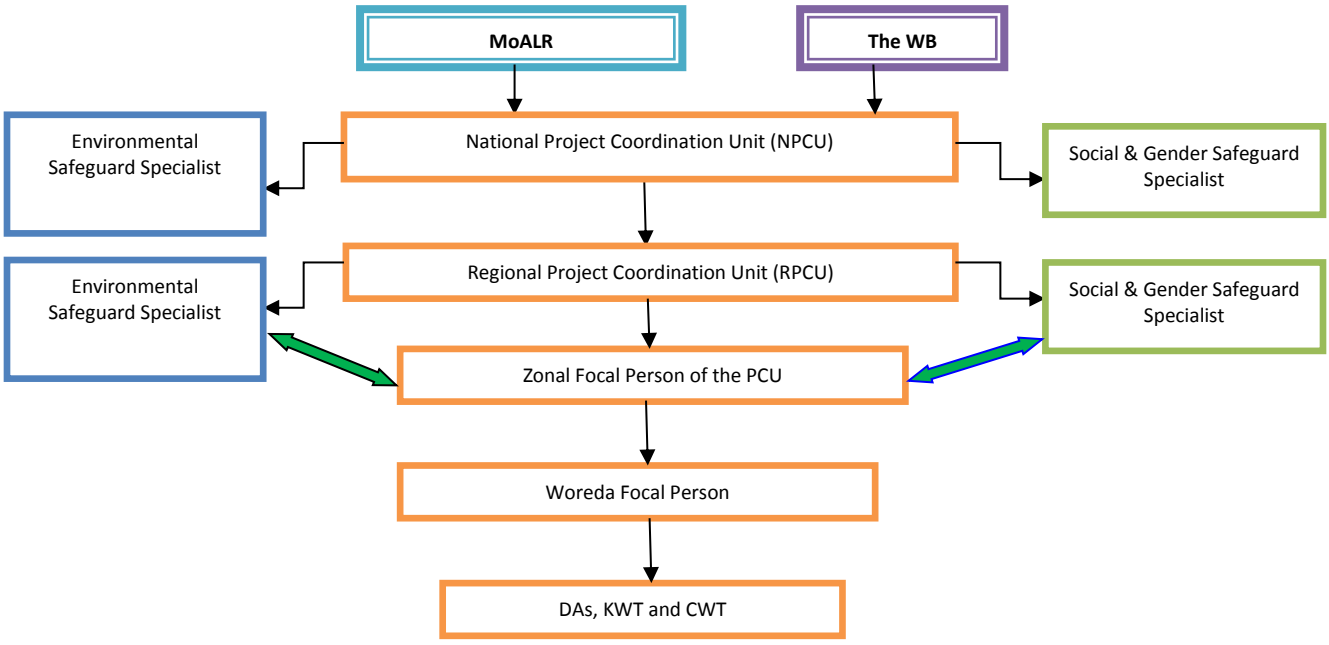
48. *Zonal Safeguards Focal Person*: the RLLP at zonal level is led by a steering committee. The safeguards focal person at the zonal level is responsible for the overall coordination and monitoring of the environmental and social safeguard activities at woreda level. He/she will compile and consolidate quarter and annual reports submitted by the woredas.

49. *Woreda Safeguards Focal Person*: The woreda safeguards focal person is responsible for coordinating the different stakeholders in the planning and implementation of the RLLP activities at woreda, kebele and community level. He/she supports kebele Development Agents in the identification and screening of subprojects. He/she will follow the implementation of mitigation measures that are planned in the ESMP.

50. *Kebele level implementation*: identification and initial environmental and social screening of subprojects of RLLP starts from community and kebele level. The KWT and CWT at kebele and community level, respectively are responsible to follow up and monitor the implementation of the Environmental and Social

Management Framework, SA, RPF and the gender action plan.

Figure 2: Environmental and Social (including Safeguards) Management Arrangements



Monitoring and Evaluation

51. The institutional arrangements for M&E will encompass six levels that are well aligned with the RLLP institutional and implementation arrangement.

52. *Federal Level*. Federal level sets the expectations for what is to be accomplished in M&E and oversees that capacity, ensuring skills and tools are available for staff in the regions and at field level. Federal level M&E staff ensure that data collected meet quality standards, review aggregated field data to analyze and pull out program level results and trends and identify best practices important for scale up. The federal level M&E staff prepare reports to the government and donors and provide feedback to stakeholders. The Federal M&E team will include: a Senior M&E/Evaluator, a Senior Data Analyst/MIS Specialist, a Senior Communication/ Knowledge Management Specialist, and a Documentation/Planning and Reporting Specialist. The team will also provide: technical assistance to develop a new Results-Based M&E (RBME) plan, manual and indicator protocols; TA support in M&E Training (various topics including advanced excel, data analysis and reporting, and evaluation practice); a functional web-based data management system (in English and local languages), which will help to aggregate mobile application data and collect geo spatial data.

53. *Regional Level*. The M&E team of the Regional PCU leads rollout of the M&E system to the field, builds skills and capacity in regional and field level stakeholders; ensures that data collected meet quality standards; aggregates field data to analyze and pull out regional levels results and trends and identify best practices important for scale up; prepares reports to the government and donors and provides feedback to stakeholders. The regional team will include a M&E Specialist and a Communication/Knowledge Manager/Spatial Analyst. The

team will also support: special studies in the region, involve regional officers in Joint Monitoring Missions (JMM), improved data management system in English and local languages, and incentives for good regional performance, TA for training using TOT approach.

54. *Zonal Level*. RLLP will strengthen the functionality of the zonal government structures/offices, mainly the Agriculture and Natural Resources Office. The project will provide a budget allocation at the zonal level to provide staff to support regional technical capacity and mentoring, and to conduct data quality assessments, provide clear guidance on what and how to collect data, provide ongoing M&E training and capacity building in M&E.

55. *Woreda Level*. Watershed needs are identified, annual work plans and budget are completed, making sure that activities get rolled out on time. The woreda team includes the NRM process owner and technical expert, who receive data from the DAs and aggregate results to determine if activity implementation is occurring at the right scale. They prepare reports based on results achieved. Woreda officers are supported by regional and Federal M&E staff (particularly in completing reports).

56. *Kebele Level*. Development Agents (DAs) play a significant role at kebele level. Clear guidance is needed for DAs on what and how to collect data (strengthen data collection methods), to strengthen ongoing M&E training and capacity building, and to provide educational opportunities/exchange visits to DAs assigned to follow-up project activities to help motivate them and reduce frequent turnover.

57. *Community Level.* There are several levels of community members who are involved in M&E, but the CFs is the main project interlocuter—the Foremen/Forewomen, nursery operators and self-help group leaders collect data and pass it to the CF, who also collects additional household level data. The CF aggregates data and passes it to the CWT. The CF is a member of CWT and serves as a secretary. The CWT reviews and approve the data and inform the CF to send it to the concerned DA in the respective kebele. The DA presents the data to the KWT for review and approval, and finally sends the approved data to the woreda office.

Role of Partners (if applicable)

58. IDA resources provided through RLLP will be blended with grants from bilateral agencies through a MDTF. The Government of Norway has committed to extend the same level of support it provided to SLMP-II through a contribution to the MDTF for RLLP. The Government of Canada has also expressed an interest in contributing in 2019. While the Government of Norway has provided a letter of commitment for the Trust Fund resources indicated, there remains a low risk that this co-financing may not be agreed. In this case it would be necessary to: (i) reduce the number of new watersheds selected for SLWM interventions from 17 to 14, and correspondingly reduce the target values to be achieved against PDO-level results indicators 1, 1a and 4 by 2 percent, 1 percent and 3 percent, respectively; and (ii) reduce the number of SLLCs and communal land certificates to be issued, as well as the number of locations in which support is provided for land-use planning and the rollout of the NRLAIS, although these changes would not affect the target values of the PDO-level results indicators.

59. At the Government of Ethiopia's request, the World Bank is preparing proposals for additional financing to RLLP from (i) the Green Climate Fund (GCF), with a proposal submitted for consideration by the GCF Board meeting to be held in October 2018, and (ii) the GEF, to be financed from Ethiopia's GEF-7 allocation.

Beyond this co-financing and additional financing, the use of resources under RLLP will also be coordinated with parallel financing to the SLM Program provided by the Government of Germany (through both GIZ and KfW Development Bank), as well as parallel financing for land administration and certification from a variety of sources, notably DFID LIFT, the Government of Finland REILA, and the Government of Germany (for land use planning).

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

COUNTRY : Ethiopia
Ethiopia Resilient Landscapes and Livelihoods Project

Strategy and approach for implementation support

1. Effective support to the Federal PCU is critical for efficient and effective implementation of RLLP. Collaboration with other key stakeholders is also important, including development partners supporting the SLMP (in particular Norway, Canada, GIZ, DFID, REILA), and research institutions (such as WLRC, EDRI, and CGIAR institutions). During RLLP preparation, effective participatory collaboration among all these stakeholders was successfully carried out, which enriched the design of RLLP. The same collaborative approach will be adopted and further strengthened during RLLP implementation.

2. The main areas of focus and skills requirements for implementation support to be provided by or through the Bank are as summarized in Table 3.1.

Table 3.1. Main areas of focus and skills requirements for implementation support

Time	Focus	Skills needed	Partner role
First 12 months	• Initiating critical procurements • Strengthening M&E and reporting systems • Strengthening FM systems • Mainstreaming hydromet activities • CSA • Livelihood and community development • Spatial planning and coordination with other stakeholders • Systematic ToTs • Communication and outreach • Grievance Redress Mechanism	A variety of technical skills such as land use administration, CSA, hydromet, water resource management, biodiversity conservation, land management, Safeguards, Communication, procurement, and FM.	Participation in meetings for improved development partner and sectoral coordination
13–60 months	• Continuing critical procurements • Maintaining M&E and reporting systems • Continuing coordination with stakeholders • FM, procurement • CSA • Hydromet • Safeguards and GRM • Livelihood and community development • Land use administration • Systematic training programs • Communication, Knowledge generation and dissemination • Project reporting	Same as above, including knowledge management	Participation in meetings for improved development partner and sectoral coordination

Implementation support plan

3. Implementation support missions will be carried out twice a year with the Bank, GoE, and development partners during the life of the project. A Midterm Review will be carried out to assess the project progress, achievement of the key indicators, risks and mitigation measures, and relevance of activities. MoALR will undertake an independent evaluation at the midterm and at closing. Implementation support funds for the Bank team are, and will continue to be, provided by IDA and the MDTF.

4. Table 3.2 shows the estimated input requirements for key personnel to carry out implementation support for the program.

Table 3.2. Main areas of focus and skills requirements for RLLP implementation support

Skills needed	Number of staff weeks per year	Number of trips	Comments
Team lead (1)	10	Local trips	TTL - International staff Ethiopia CO
Land administration specialist	10	2/year	International staff in Bank HQ
Land administration specialist	10	2/year	International staff in Ethiopia CO
Natural resource management specialist	10	2/year	International consultant
Agriculture specialist	6	2/year	International consultant
IGA and Value Chain Specialist	20	Local Trips	International consultant in Ethiopia CO
Land-use planning expert	20	Local trips	National short-term consultant
Environmental specialist	20	Local trips	National staff
Natural resource management specialist	20	Local trips	National short-term consultant
Social development specialist	6	Local trips	National staff
Environmental safeguards specialist	6	Local trips	National staff
Operations specialist	8	2/year	National short-term consultant
M&E specialist	10	Local trips	International consultant in Ethiopia CO
Procurement specialist	6	Local trips	National staff
FM specialist	6	2/year	International staff
Communication specialist	6	2/year	International staff/consultant
Communication and KM specialist	10	2/year	National short-term consultant
Team assistance	10	Local trips	National staff

5. It is planned that a significant part of the expertise required can be mobilized locally in the country office, including team leadership. An international mission-based approach will not suffice to respond to coordination and implementation issues adequately and in a timely manner. Therefore, a significant part of the task team is decentralized and this will continue to enhance implementation support. Fiduciary and safeguards support is also provided at the country office. In addition to missions and on-call support, the task team regularly holds proactive monthly or quarterly implementation support meetings, including with team members/experts based outside of Ethiopia connected by audio/video connection. This approach has proven to be effective in other projects and programs in Ethiopia and in other countries.

Annex 4: Economic and Financial Analysis

Background

1. The project will support households in 152 watersheds located in the Ethiopian highlands. The watersheds are located in 6 different regions. This includes 17 newly identified watersheds, continuing support for 90 watersheds initiated under SLMP-II, and 45 graduating watersheds supported under SLMP-I. The new watersheds were selected using a comprehensive selection criteria which took into account existing levels of degradation and the share of the watershed in need of sustainable land management interventions. The graduated watersheds from SLMP were included to ensure that they receive the necessary support to continue capturing the gradual build-up of benefits and avoid falling back into degradation.

2. **Without project intervention, beneficiaries both in the area and downstream will continue to struggle to establish or maintain their livelihoods.** The watersheds have a mixture of both cropland and non-cropland uses with the total area to be treated within the 152-watershed project area estimated at 430,000 ha. The number of beneficiaries includes the entire population in these watersheds and is estimated as 3.2 million or 640,000 households with an average of 5 persons per household. It is expected that without the project, land use will continue on its current path. Continued soil erosion, water insecurity, and land insecurity leads to land degradation with direct losses to those that rely on crop and livestock production as well as related industries for their livelihood. Production yields will go down or farmers will have to increase their input costs, such as fertilizer, to maintain current yields. In the absence of storage facilities, farmers will continue to experience post-harvest losses. They will also be unable to capture higher crop prices that are obtainable a few months after harvest and in larger markets. Non-agricultural land in the watershed will also continue to deteriorate without the project due to soil erosion as well as overuse of common land through grazing livestock and firewood collection. This will put a further strain on the population who derive their livelihood from forests, woodlands, and surrounding areas. Downstream from the project area, continued land degradation will also affect areas and households through increased flood risk and sedimentation of irrigation dams.

3. Figure 1 illustrates how this analysis assumes a declining production without project interventions due to soil erosion. With project interventions the yield loss is avoided and, for some production systems (crops, livestock, and grassland), with-project yields increase over time. This yield increase is attributed to adoption of improved cultivars, improved seeds, better animal breeds, land restoration, water management, and implementing climate smart agricultural techniques. The sum of the two shaded areas in Figure 1 constitute the incremental benefit. Total investment costs of US$129 million and a US$38 million estimate for beneficiary in-kind contributions are included in the EFA[29].

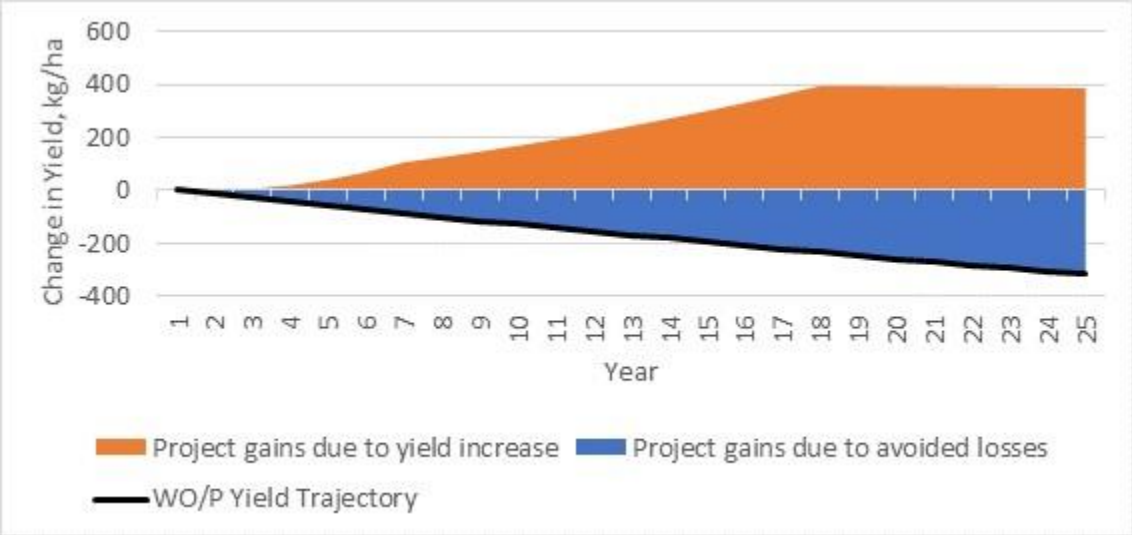
Rationale for Public Provision and Financing

4. **There is a strong rationale for public interventions as proposed by the project.** One of the core functions of government is to supply public goods and to correct market failures. The current land degradation issues warrant more targeted public investments that can ensure that private sector entities adopt sustainable management practices going forward. The proposed project would help focus attention and assistance not only

[29] Beneficiary contribution includes US$25 million in-kind contribution to labor costs calculated as 50% on communal land and 80% on private land (equal to 34% of US$ 78 million in Component 1). An additional US$ 13.1 million on top of the US$ 15 million Component 4 budget is assumed as in-kind contribution from the GoE for staff and office costs of federal and regional governments (same proportion as assumed in SLMP 2 PAD p 15, World Bank 2013).

on promoting sustainable land management to improve agricultural productivity, but also on helping beneficiaries become more resilient to extreme weather events. Project activities encourage: protection of ecologically sensitive landscapes; more efficient energy use; securing beneficiaries land rights, and; increasing sequestration of carbon in soils and biomass.

Figure 1: Illustration of Incremental Benefits



Methodology

5. **A cost benefit model is used to assess the ex-ante efficiency of the project investment.** All project interventions are considered necessary to obtain the target impact; therefore, the entire investment cost is included in this analysis (US$129 million plus US$39 million from beneficiary in-kind contributions less 0.9% or US$1.5 million price contingencies). In addition, recurring costs in the years after project has ended are estimated to be 2.5% of initial costs. Annual cash flows are estimated as the difference between without-project (WO/P) and with-project (W/P) net benefits for direct beneficiaries.

6. **Some benefits are captured for all project Components – directly or indirectly.** Project activities in Component 1 include enabling community plans for land restoration and watershed management. The plans include physical soil conservation as well as biological conservation techniques. Beneficiary farmers will be targeted to adopt climate smart agriculture practices. Beneficiaries will also receive support to diversify their income generating activities and adopt energy efficient stoves and lights. The benefits to be captured through these interventions are enabled by strengthening institutions, policies, and information flow through Component 2. It is also necessary to strengthen participatory land use planning and secure tenure rights for beneficiaries through Component 3. This will enable them to adopt new production practices and continue operating sustainably after project implementation is complete.

7. All project activities are associated with both costs and benefits. The following incremental net benefit flows are expected – some of which are quantified while others are discussed qualitatively. Net benefits are benefits or revenue less costs. Incremental net benefits means the difference between the W/P and WO/P situations.

a) **Direct net benefits to crop producers:** The EFA quantifies the incremental improvement in gross margins for different crops and cropping patterns on farms in the targeted watersheds. The increment includes expected WO/P yield- and price losses due to the absence of storage facilities. It also includes net benefits from establishing green corridors along field margins, eroded gullies etc.. A portion of this incremental benefit is due to avoided soil erosion. This estimate is calculated separately from the impact on yield (see illustration in Figure 1).
b) **Direct net benefits to livestock producers:** The EFA quantifies incremental improvements in gross margins for different livestock production systems and stocking rates on farms in targeted watersheds.
c) **Direct net benefits to forests and other non-croplands:** The EFA quantifies the net improvement in gross margins for different categories of land use including forest plantations, green corridor plantations, bush, shrub, and grassland. A portion of this incremental benefit is due to avoided soil erosion. This estimate is calculated separately from the impact on yield (see illustration in Figure 1).
d) **Direct benefits from new storage facilities:** Due to the lack of data regarding establishing new IGAs, this EFA only quantifies the establishment and operation of 16 storage facilities associated with linkages to local value chains in 16 pilot woredas. Net benefit is estimated from gross margins for each facility, in addition to net benefits captured at farm level described above.
e) **Direct benefits from promoting energy efficiency:** Project activities promote energy efficient cook stoves that can reduce the amount of woody biomass harvested for cooking and heating. To analyze adoption of improved cook stoves the reduced use of firewood is quantified together with time-saving for women and reduced CO2-equivalent emissions. The investment costs as well as replacement costs are included.
f) **Global value of impact on carbon balance:** The project impact on carbon balance is estimated using FAOs EX-ACT model. This considers changes in land use, land restoration and input and energy use. There are no actual payments of carbon credits to beneficiaries in this project, so the social value of carbon is included only in the economic analysis and not in the financial analysis.

8. The following incremental net benefit flows are not quantified explicitly in this analysis:

a) **Net benefits from new Income Generating Activities (IGA)**: The project will engage farmers through CIGs. Apart from storage facilities, several other possible enterprises have been noted but lack of data prevents quantification at this time: grain-, meat-, dairy-, and bamboo-processing; tree seedling nurseries; and manufacturing improved cook stoves.
b) **Net benefits from promoting energy efficiency**: The value of reduced indoor air pollution from the introduction of improved cook stoves is not quantified.
c) **Net benefits from strengthening institutions and improving information, and monitoring for resilience (Component 2):** The net benefits estimated in activities in Component 1 cannot be successfully captured without the investment in Component 2 to strengthen stakeholders and provide technical assistance and mobilize communities. It is difficult to determine the share of project benefits that can be attributed to these sub components. Therefore, a separate efficiency analysis is not undertaken.
d) **Benefits from improved administration and tenure rights (Component 3):** The lack of secure tenure rights creates a dis-incentive for beneficiaries to undertake productive investments and adopt sustainable management practices. This is particularly the case when benefits accrue over a longer period of time. The direct benefits of this component are captured in Component 1 while other benefits are not quantified due to lack of data. These other benefits could include conservation of protected areas, biodiversity, and tourism.
e) **Indirect benefits to other local areas:** Several of the incremental benefits quantified as described above will likely have other indirect benefits. For example, these include the adoption of climate smart agriculture and

land restoration techniques in neighboring watersheds due to informal dissemination outside the project area. Other industries and employment opportunities may increase through a multiplier effect to other areas and related sectors. Due to lack of data these are not quantified in the EFA.

f) **Downstream effects:** Downstream effects from reduced soil erosion are also not quantified due to lack of data. These benefits could include reduced risk of downstream flooding and reduced costs of sedimentation in downstream irrigation schemes.

g) **Improved nutrition:** Incremental benefits from improved nutrition have not been quantified other than through value of increased production yields. The value of a more varied food production has not been estimated. This would be a direct benefit to project beneficiaries and indirect benefit to people in neighboring areas.

9. **Efficiency and other cost-benefit indicators.** The cost-benefit analysis is based on crop-, and farm-level assumptions on yields, prices and costs in constant 2018 currency amounts for without- and with-project situations, based on a typology of farm households.[30] The Economic Net Present Value (ENPV) is calculated using the World Bank recommended discount rate of 5%.[31] The financial discount rate used is 12% to reflect the opportunity cost of capital in Ethiopia. In addition to sensitivity analyses of these discount rates, the break-even rates are calculated, i.e. the Economic and Financial Internal Rates of Return (EIRR and FIRR). Other indicators included are (units in parentheses):

a) Land area restored, reforested and afforested with sustainable management practices (hectares)
b) Target area in different land use categories (hectares)
c) Reduced soil erosion (tonnes)
d) Production and income in representative farm households (yield and US$)
e) Increased net benefits from storage facilities for access to Community Storage Receipts Programs (CSRPs) (US$)
f) Net benefits from improved cook stoves (reduced firewood use, time saving, reduced emissions, US$)
g) Impact on carbon balance (CO2-equivalent and US$)

10. **Results are aggregated to different levels for further analysis.** Using data collected and assumptions made by the project team, the methodology goes further than the total project results to enable analyses at different levels of aggregation:

a) At the base of the model are data on per hectare gross margin for annual crops and avoided yield loss from soil erosion. Gross margins for livestock production are calculated per head of animal.
b) Representative farms are defined in terms of farm size and combinations of different annual crops and livestock. This enables an analysis of estimated impact on incremental farm household income.
c) Incremental net benefits on non-cropland are estimated at the watershed level. This includes any projected per hectare changes in gross margins as well as avoided yield loss from soil erosion.
d) Adoption of improved cook stoves as well as establishment of storage facilities are estimated at the watershed level.
e) Global impact on the carbon balance is estimated at the project level and allocated proportionally between watersheds.

[30] The foreign exchange rate used is 1 US$ = 28 ETB. Ethiopia Consumer Price Index to adjust 2014 to 2018 prices = 131.7.
[31] World Bank (2015). Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects. Washington, DC.

11. **Cumulative target values and farmer adoption rates.** Investment costs are allocated across the initial years as detailed in the project cost tables. Farmers' adoption of improved agricultural practices promoted by the project is assumed to follow a progression of 5% per year. This includes a progression in farmers' revenue as well as variable costs. The project team expects the maximum adoption rate to be 75% of the targeted farmers based on the 86% rate in the SLMP-II baseline study (MOALR, 2016).[32] In graduated watersheds it is assumed that farmers adopting new agricultural practices have already progressed for four years under SLMP.

12. **Conversion factors for economic analysis.** An economic analysis is concerned with value addition to the gross domestic product and excludes all transfer payments such as taxes, subsidies, grants, loans, interest- and principal payment paid to or received from beneficiaries. Because none of the agricultural products quantified in this model are imported or exported, the farm gate prices are applied both in the financial and economic analysis. The opportunity cost of unskilled labor is set to 0.75 due to limited alternative employment opportunities. It is expected that some agricultural and construction inputs are imported and should be converted from farm gate prices using an economic conversion factor (assumed to be 0.95). Much of the variable costs included in the analysis is unskilled labor. Therefore, average conversion factors are used for cropland variable costs (0.98), non-cropland variable costs (0.88), and project investment costs (0.98). All other cost assumptions are maintained from the financial analysis. As noted before, price contingencies estimated at US$1.5 million or 0.9% of the project budget is excluded from the analysis.

13. **The project's impact on Greenhouse Gas (GHG) emissions is estimated using the Ex-Ante Carbon-balance Tool (EX-ACT).** The economic value of the project's impact on the carbon balance is estimated from activities in the project including: bio-physical structures on degraded land; afforestation and reforestation; promoting agroforestry; introducing climate-smart agriculture practices; introducing improved grassland management; and enriching forest areas with different tree species. This improved carbon balance is multiplied by the assumed economic value from US$ 32 per tonne CO_2-equivalent in early years increasing to US$ 68 at the end of the 25 years. No value is assigned to improved carbon balance in the financial analysis because there are no direct payments of carbon credits to beneficiaries.[33]

14. **Sensitivity analyses identify key assumptions that should be the focus of risk management efforts.** Three different approaches are used: i) switching values, when a change in an assumption leads to a break-even ENPV, are calculated for most assumptions. ii) Elasticities are also calculated for most assumptions to show how much a 1% change in an assumption changes total ENPV; and iii) Specific cases are analyzed to further highlight key risk factors and quantify the impact of variables that cannot be analyzed with switching values and elasticities as listed below:

a) Impact of different discount rates
b) Changes in adoption rate among beneficiaries
c) Delay in project benefits

[32] Other examples include: 74% adoption rate in the Uganda-National Agricultural Advisory Services Project (NAADS) and 70-80% adoption rate in the IFAD Rwanda Project for Rural Income through Exports (PRICE). In the Pro-poor Value Chain Project in the Maputo and Limpopo corridors (PROSUL) economic and financial analysis, an 80% adoption rate was assumed in the project area. 100% adoption rate was assumed in Malawi Shire River Basin Management Programme and the Community-Based Rural Land Development Project.

[33] Current World Bank Guidelines suggest a social cost of carbon of US$ 30 per tonne CO_2-eq in 2015 building up to US$ 80 per tonne in 2050. World Bank (2014b) Social Value of Carbon in project appraisal. Guidance note to the World Bank Group staff. Washington, DC, July 14. US$ GDP Deflator to convert 2014 to 2018 prices = 105.2.

d) Higher yield losses from soil erosion
e) Changes in number of animals per farm
f) Changes in the social value of carbon

Assumptions and Results

15. Before analyzing the economic value results, the underlying assumptions are discussed starting with a financial analysis of farm-level target beneficiaries. Note that the value of improved carbon balance is not included in the financial analysis because payments for carbon credits are not expected to be distributed directly to beneficiaries during the project.

Financial Analysis

16. **Project interventions are assumed to lead to improved crop and livestock gross margins provided there is long-term maintenance.** One farm model is established for each region based on cropping pattern and gross margin data from the SLMP-II baseline study (MOALR, 2016) and gross margin study (Große-Rüschkamp, 2015). It is assumed that the project has no impact on crop prices. For livestock production, a price increase is included because project intervention is expected to lead to use of improved breeds and quality of produce. Yield increases are expected to be small (10-14%) on irrigated crops, and larger on rain-fed crops (16-70%). To achieve these yield increases, variable costs will also increase. Gross margins on key crops are assumed to increase by between 11% and 75%. Gross margins from livestock production increase, particularly in dairy (123%) and sheep rearing (60%). Any yield increases are assumed to build up over time with long-term maintenance, which is also emphasized by Schmidt and Tadesse (2017).[34] As a proxy for variable weather, it is assumed that revenue generated on cropland is reduced by ten percent every five years due to an extreme weather event. There are no available data on which to base an assumption of changed cropping patterns due to the project. In recent impact studies of the SLMP-II project there are indications that farmers who are able to increase the yields of different livestock are tending to reduce their herd size. This is not assumed in the base case but included in the sensitivity analysis.[35]

17. **Some crop gross margins are used as proxies for other crops when data are unavailable.** Not all crops featured in the SLMP-II baseline study have gross margin data available. Therefore, some crops have been combined to cover 100% of farm area by region: sorghum is combined with millet. Oilseeds are combined with peas. It is assumed that 100% of potatoes are irrigated in Tigray, Amhara, Oromia, and Benishangul Gumuz. Potatoes are rain-fed in Gambella and SNNPR. Rain-fed vegetables are valued as rain-fed potatoes including 90% of vegetables in Tigray, Amhara, Benishangul Gumuz, and SNNPR, and 50% of vegetables in Gambella and Oromia. The remaining vegetables are irrigated and valued as tomatoes.

18. **Estimated farm-level gross margins increase by over US$ 106/year/person, which is 1.2 times the Food Poverty Line.** Farm-level income increases by 55-65% on different representative farms. When assuming 5 persons per household farm gross margin can increase at least US$106 per household member per year. To

[34] Schmidt and Tadesse (2017) suggest that there are no measurable improvements in productivity from SLMP, although the authors also acknowledge that there are problems with the data: They found that, over the analysis period, value of production increased significantly in both treatment and non-treatment areas.
[35] In reality, cropping patterns are driven by demand and supply. However, the EFA model is deterministic and does not include a dynamic adjustment of cropping patterns between years and different farmers. The assumptions are based on the Project team's best judgement.

associate this result with a measure of absolute poverty, we use the National Poverty Line for Ethiopia. The poverty line indicates the money required to afford the food covering the minimum required caloric intake (Food Poverty Line) and additional non-food items. The improvement in farm gross margin is around 1.2 times the Food Poverty Line in 2018 terms (US$85/person/year).[36] This improvement is also about 66% of the total National Poverty Line (US$162/person/year). Other representative farms are estimated to capture higher growth in gross margins of up to US$140/person/year.

19. **Estimated gross margins on non-cropland.** Project interventions will transform 18,000 ha from bush or grassland to forest plantations, 7,500 ha from unproductive cropland to green corridor plantations, and 2,500 from bush or grassland to green corridor plantations. Because most incremental benefits generated from cropland converted to green corridors will be captured by farmers, this is valued as part of farm crop margins. It is assumed that gross margins do not change on most non-cropland areas. The exception is that biophysical treatment of grasslands will improve estimated gross margins by 90% due to doubled yields and increased maintenance costs.

20. **Estimated gross margins for storage facilities.** It is assumed that access to a storage facility will mean that farmers avoid a post-harvest yield loss of 10%, and they will be able to obtain 5% higher prices. The fee farmers pay to sell their produce via these facilities is assumed to be 10% of the farm gate price. Produce is purchased from farmers at 5% over original price. Variable costs also include 34 days of labor per month valued at US$2.14 per day. For this analysis it is assumed that a community warehouse runs at an annual gross margin of 10% to cover their fixed costs. An additional price premium is therefore charged to buyers to reach the 10% gross margin target. It is assumed that the warehouse capacity corresponds to 25% of each area's crop production and that 50% of their production requires storage. Combining area production with the planned size of storage facilities (480 m3) this constitutes warehouse capacity of 56-103 tonnes/facility. With the current size of storage facilities, they could probably absorb up to 100-200 tonnes depending on location and crop. As such, part of the risk management plan could be to ensure that the storage facilities are used to their capacity. Note that no warehouses are established in Gambela and Benishangul Gumuz. For this analysis, the 16 planned warehouses are proportionally allocated between larger watersheds in Tigray, Oromia, Amhara, and SNNRP regions.

21. **Estimated net benefits of improved cook stoves.** Fuel wood savings are assumed to be 0.78 tonnes/household/year based on an average firewood consumption of 1.95 tonnes/household/year and increased stove efficiency from 12% to 20%. The firewood price is assumed to be 39 US$/tonne based on the price of 19 US$/m3 with average density of 500 kg/m3. Beneficiaries save time because they currently spend an average of 3.5 hours per day, and with improved fuel efficiency they only need 0.5 hours per day. The time spent collecting firewood is valued at an average rate of 0.5 US$/day. CO2-equivalent emission reductions amount to 0.89 tonne CO2/household/year – valued at the social value of carbon discussed earlier. The initial investment costs for distributing 300,000 improved cook stoves is included in the project budget. In addition, replacement costs of 55 ETB/stove are included every 3 years.

22. **The project activities help avoid yield losses caused by soil erosion. This avoided yield loss is valued based on the gross margin data on different land uses.** To establish the linkage between reductions in soil erosion with the project activities, a Universal Soil Loss Equation (USLE), adapted to Ethiopian conditions, was used to

[36] The 2011 National Poverty Line was 3,781 ETB/adult while the Food Poverty Line was 1,984 ETB/adult leaving Non-food Poverty Line of 1,796. Ethiopia Central Statistical Agency (2014) and World Bank (2015b). It is assumed that a household of 5 persons is 3.1 adult equivalents. These are converted to 2018 amounts using CPI factor 1.88.

model soil loss associated with each of the technologies. The USLE relates soil loss from a field to local climatic conditions, soil type, topography, and land and crop management variables. Annual soil loss is given as a function of the rainfall erosivity of a given soil type, the slope length, crop cover factor, and the conservation practice on the land. Based on a review of studies linking soil loss to productivity loss, it is assumed that watersheds with between 10 and 25 tonnes/ha/year soil loss experience a 0.5% yield loss. When between 25 and 35 tonnes soil/ha/year are lost, yield loss is 1%, and if soil loss exceeds 35 tonnes/ha/year yield loss is 1.5%.[37] Graduated watersheds from the SLMP program are included in the investment and incremental net benefits from continued avoided soil erosion are captured. Because the physical treatments in those watersheds were done earlier in the SLMP program, no additional yield improvements are attributed to the RLLP.

23. **Aggregation to project level provides an estimated return on investment in financial terms.** Net benefits as described above are aggregated up to represent the entire area of crop- and non-cropland in each watershed and in the project overall. The aggregation includes the 18,000 ha of land transformed to forest plantation and 10,000 ha of land transformed to green corridor plantations. The total net benefit from 16 storage facilities and 300,000 cook stoves are included in the aggregation as well. All watersheds are not developed in the first year, but follow the gradual disbursement plan of the project budget with 19% in year 1, 36% in year 2, 20% in year 3, 15% in year 4 and 10% in year 5. Within each watershed beneficiaries follow the assumed gradual adoption rate of improved farming practices increasing annually by 5% up to a max of 75% of the area. Incorporating this adoption rate includes a progression in farmers' revenue as well as variable costs.

24. **The project's overall Financial NPV is US$365 million (ETB 10.2 billion) with a Financial IRR of 33% and a benefit cost ratio of 2.5. The payback period is 6.7 years (see Table 1).** This estimated net return constitutes 0.5% of Ethiopia's GDP in 2016 and is also US$ 10 per ha per year when including the entire project area of 1.5 million ha (treated and not treated areas).[38] The FNPV measured per person per year is 3% of the National Poverty Line and 5% of the Food Poverty Line.

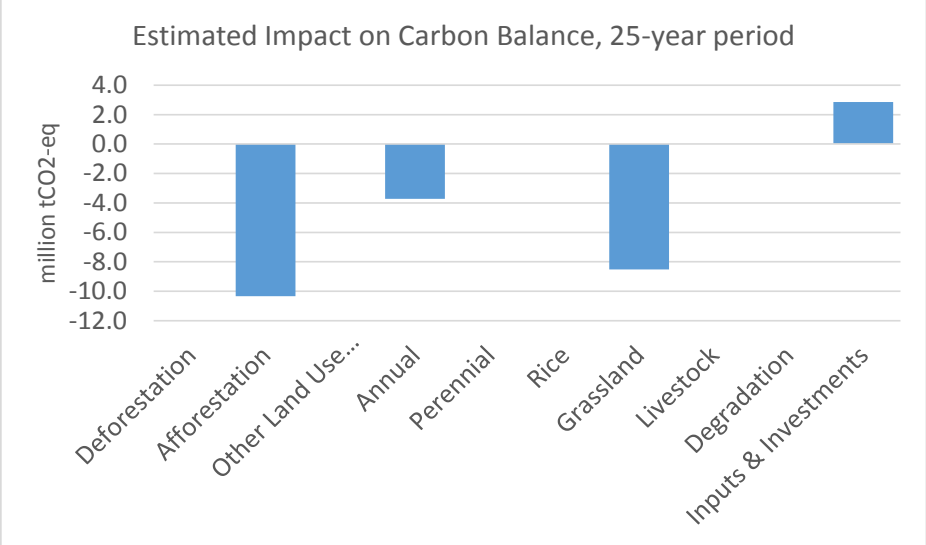
Economic Analysis

25. As explained earlier, prices and costs used in the financial analysis are adjusted to value the economic impact of the project. The economic net benefits also include a valuation of the project's impact on the carbon balance. Investment costs include: the project budget (excluding price contingencies); beneficiary in-kind contributions; and annual recurring costs after the project is complete.

26. **The project interventions are expected to have a net-benefit on GHG emissions to the amount of 19.7 million tonnes of CO_2-eq over 25 years, which constitutes a discounted value of US$ 483 million.** GHG emission calculations using the Ex-Ante Carbon-balance Tool (EX-ACT) are done for a 5-year project and a total 25-year time frame. The results show that the project constitutes a net carbon sink of 19.7 million tonne CO2-eq emissions over a period of 25 years, resulting in 787,862 tonne CO2-eq per year or 46 tonne CO2-eq/ha. Figure 2, illustrates that most of the carbon sequestration comes from afforestation and improvements to grassland and annual agriculture. Together with increased use of fertilizer, herbicide, and diesel as well as building construction, the project constitutes a net carbon sink.

[37] Pagnos et al. (2018) provide a review of many references on this topic showing ranges of productivity loss from less than 1% to over 20%. Gebreselassie et al. (2016) also refer to potential productivity losses of 10-30% due to soil erosion.
[38] World Development Indicators database. GDP data for Ethiopia as of 2016. Accessed 22 February 2018.

Figure 2: Economic Analysis – Greenhouse Gas Mitigation Potential



27. **The ENPV is US$1,696 million discounted at 5% over a 25-year period (ETB 47.5 billion). This generates a benefit cost ratio (EBCR) of 5.3 and an EIRR of 60% with a payback period of 4.5 years (see Table 1).** When excluding the social value of carbon, the net project return is US$1,063 million (ETB 30 billion) with a benefit cost ratio of 3.7 and an EIRR of 34%. Without the impact of the carbon balance, the payback period is 6.7 years. This is 1.5% of Ethiopia's GDP (in 2016 terms). Without the carbon balance, the ENPV is US$29/year/ha (total project area both treated and not treated) or US$ 13/year/beneficiary. Relative to the measure of absolute poverty, this is 8% of the National Poverty line and 16 percent of the Food Poverty Line. The annual cost and benefit flow for the project as a whole is illustrated in Figure 3.

Table 1: Economic and Financial Analysis – Key Efficiency Indicators

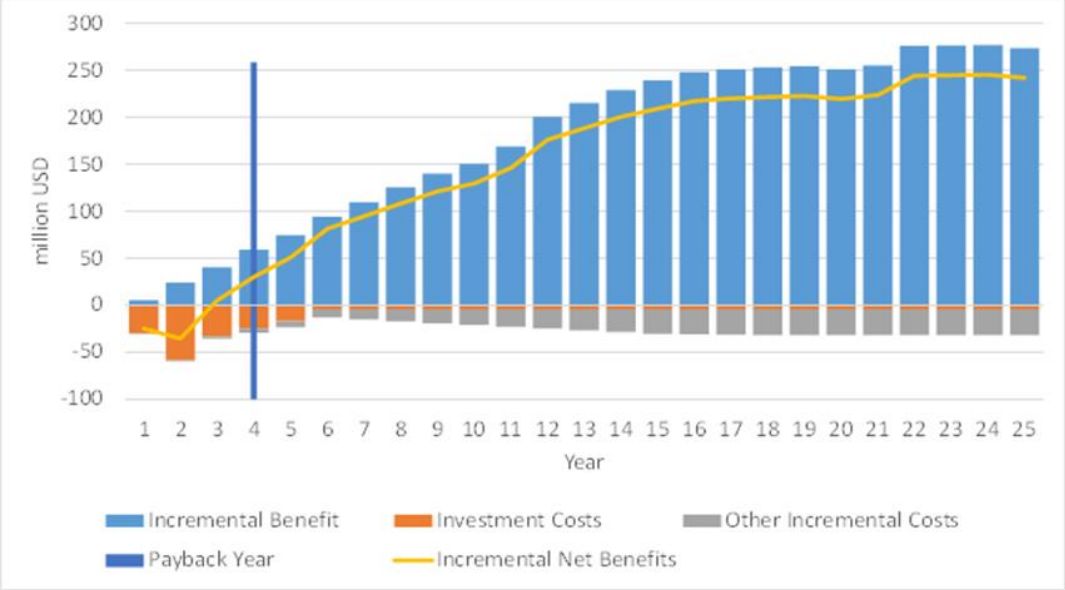
	Scenario 1 Base Case	Scenario 2	Scenario 3
	Economic Analysis	Economic Analysis excl. Carbon Balance	Financial Analysis
Net Present Value, million US$	1,696	1,063	365
Benefit Cost Ratio (BCR)	5.3	3.7	2.5
Internal Rate of Return (IRR)	60%	34%	33%
Payback Period	4.5 Years	6.7 Years	6.7 Years
NPV as share of 2016 GDP	2.3%	1.5%	0.5%
NPV, US$/ha	1,139.8	714.7	245.3
NPV, US$/year	67,830,089	42,535,895	14,595,818
NPV, US$/year/ha	45.6	28.6	9.8
NPV, US$/year/household	105.4	66.1	22.7
NPV, US$/year/beneficiary	21.1	13.2	4.5
Share of National Poverty Line	13%	8%	3%
Share of Food Poverty Line	25%	16%	5%

Note:

- Economic discount rate = 5%. Financial discount rate = 12%. Analysis period is 25 years.
- Total 25-year Carbon Balance from EX-ACT model = 19.7 million tonne CO2-eq. Economic CO2-eq value = US$32/tonne to US$68/tonne by year 25.
- Impact on carbon balance includes ENPV of US$483 million from EX-ACT estimation + US$151 million due to reduced emissions from improved cook stoves.
- Project area (treated and not treated) = 1.5 million ha. Number of beneficiaries (population) in Project area = 3.2 million. Number of people per household = 5.
- 2011 National Poverty Line, 2018 amount = US$ 162 /person/year. 2011 Food Poverty Line, 2018 amount = US$85 /person/year. 2016 GDP = million US$72,374.
- Exchange rate: 1 US$ = ETB 28

28. **The estimated value of soil erosion varies between US$ 0.03 and 0.26/tonne soil depending on the gross margin value of different land use.** Because the value of the avoided erosion is based on gross margins, cropland erosion on new watersheds is valued at US$ 0.23/tonne soil versus US$0.26/tonne soil on graduated watersheds (ETB 6.5-7.4/tonne soil). This is because the graduated watersheds are already at a higher productivity level. The gross margin values on non-cropland are lower, so the avoided soil loss is valued between US$ 0.03/tonne soil (ETB 0.8/tonne soil). This compares to the original SLMP-II EFA where it was assumed that the value of one tonne soil was ETB 0.79 in 2013 terms which converts to ETB 1.1 in 2018 terms.

Figure 3: Economic Analysis - Estimated Annual Flow of Benefits and Costs



29. **Table 2 shows that, when excluding the carbon balance, 50% of incremental net benefits are generated through activities on non-cropland areas, particularly due to the transformation of 20,500 ha from bush and grassland to forest plantation.** This constitutes an ENPV of US$114 per year per treated hectare and an EIRR of 47%. A substantial part is also generated by cropland and livestock production at US$53/ha/year and US$35/ha/year, respectively. Much of the incremental benefit estimated from cropland comes from transforming 7,500 ha of unproductive land to green corridor plantations. The return on investing in improved cook stoves is high at US$ 20/stove/year although it may be the case that more of the project investment

costs should be allocated to this benefit flow thereby decreasing the return. While overall net returns to investing in storage facilities is lower, the NPV is positive and therefore economically and financially feasible (IRR = 13%). Part of the risk management plan could be to ensure that the storage facilities are used to their capacity of up to 100-200 tonnes rather than the currently 56-103 tonnes, which is based conservatively on absorbing only part of the production from the project area. These results are sensitive to how project investment costs are allocated between benefit flows. As such, the return-on-investment results by benefit flow should be interpreted with care.

30. **The ENPV of US$ 114/year/ha calculated for non-cropland areas compares well to other estimates, while the cropland estimated ENPV of US$53/year/ha may be too conservative.** Pistorius et al. (2017, Table 2) estimate the net present value of forest restoration efforts to be US$ 17/year/ha for afforestation/reforestation of marginal sites and US$ 183/year/ha for woodlots. They use a 20-year model without carbon balance benefits and with a discount rate of 6%. In the current EFA, this could be compared to the ENPV on non-cropland, which is US$114/year/ha and includes a mixture of treatments (see Table 13). Hurni et al. (2015, Table 21) estimate the average net present value of SLM technologies to be between US$192-219/year/ha in 2014 terms. They use a 30-year model with a 12.5% discount rate and no carbon balance benefits. These estimates are considerably higher than the US$53/year/ha calculated with the current EFA assumptions – both if they are converted to 2018 terms and lower discount rate.

Table 2: Economic Analysis – Key Efficiency Indicators by Benefit Flow excluding Carbon Balance

Benefit Flow	ENPV Benefit, million USD	ENPV Cost, million USD	ENPV, million USD	EIRR	ENPV/year, million USD	ENPV/ yr/unit, USD	Unit
Cropland	319	102	217	23%	8.7	53	165,000 ha
Non-cropland	686	159	527	47%	21.1	114	185,000 ha
Livestock	250	107	143	20%	5.7	35	165,000 ha
IGA (CSRP)	26	25	1	13%	0.0	3,072	16 facilities
Improved cook stoves	152	1	151	-	6.1	20	300,000 stoves
Cropland, Graduated watersheds	28	5	23	24%	0.9	12	80,000 ha
Non-cropland, Graduated watersheds	0	0	0	-	0.0	-	0 ha
Carbon Balance	0	0	0	-	0.0	0	430,000 ha
Total	1,462	398	1,063	33.6%	42,535.9	99	430,000 ha

Note:
- Economic discount rate = 5 percent. Analysis period is 25 years.
- Costs include variable costs and investment costs. Results are sensitive to allocation of investment costs between benefit flows. Results should be interpreted with care.
- Excludes social value of carbon. Compare to Scenario 2 in Table 1.
- Exchange rate: 1 US$ = ETB 28

31. **Switching values.** A switching values analysis is reported in Table 3, where each assumption is changed until the Base Case ENPV turns zero (i.e. a break-even analysis). The project break-even is not very sensitive to any one particular assumption. On top of the list, a 104 percent decrease in livestock yields or a general 171 percent decrease in non-cropland yields could reduce ENPV to zero. The large and unlikely changes required to turn the ENPV zero in the switching values analysis does not reveal how sensitive results are at the margin. So an alternative sensitivity analysis is performed.

Table 3: Sensitivity Analysis of Economic Efficiency - Switching Values

Rank	Assumptions	Unit	Base Case Assumption	Switching Value	% change from Base Case
1	W/P Yield Sensitivity Factor, Livestock	% of yield	0%	-104%	104%
2	W/P Variable Cost Sensitivity Factor, Livestock	% of price	0%	166%	166%
3	W/P Yield Sensitivity Factor, Non-cropland	% of yield	0%	-171%	171%
4	Farm Gate Price (financial), Bull fattening, WO/P	ETB/animal	8,869.32	27,764.72	213%
5	Yield net of losses, Bull fattening, WO/P	animal/year	1.00	3.13	213%
6	Farm Gate Variable Cost, Bull fattening, W/P	ETB/animal/year	7,345.14	26,258.76	257%
7	Sensitivity Factor, Social Value of Carbon	% of value	0%	-268%	268%
8	W/P Yield Sensitivity Factor, Crops	% of yield	0%	-313%	313%
9	Yield net of losses, Milk prod, local breed, WO/P	ltr/animal/year	253.50	1,389.77	448%
10	Farm Gate Variable Cost, Milk, local breed, W/P	ETB/animal/year	3,208.63	22,196.11	592%

Note:
- WO/P = Without Project (Baseline); W/P = With Project.
- Switching value is the assumption value that causes the Base Case ENPV to turn zero (Break-even point).
- Exchange rate: 1 US$ = ETB 28

32. **Elasticities.** Instead of switching values, the elasticities of key assumptions were tested. A general one percent increase in livestock yields can lead to a one percent increase in ENPV. A 1% increase in the discount rate can lead to a 0.7% decrease in estimated ENPV. A general 1% increase in non-cropland yields increases ENPV by 0.6%. Other variables with significant impact on project returns are: adoption rates, variable livestock costs, and social value of carbon. On the basis of this analysis, as part of a risk management plan, it is particularly important to ensure that farmers can negotiate and obtain fair output prices and achieve target yields going forward, for example through establishing links to storage facilities and value chains, and providing technical advice that encourages adoption.[39]

33. Some risk factors cannot be estimated well in a switching values or elasticity analysis. To analyze the impact on project returns from selected assumptions, some specific cases were analyzed, as discussed below:

- **Increased annual adoption rate increases project returns significantly such that a doubling of the annual adoption rate from 5% to 10% can increase ENPV by 23%.** Increasing annual adoption further to 15% can lead to 30% higher ENPV. Close monitoring and support for target farmers and implementation of watershed development and management plans could help increase the adoption rate. This also includes ensuring that beneficiaries are successful at applying for credit, obtaining the necessary quality inputs, and implementing their investments.

- **Project delays can reduce returns by 5-10%.** A delay in when farmers are willing and able to adopt new farming practices and implement their investments can lead to reduced project returns. A 2-year delay in benefits can reduce the ENPV by 10% and reduce the EIRR from 60 percent to 39 percent. While not always avoidable, project delays can be minimized with close monitoring and by ensuring implementation does not lose momentum.

[39] Because the Project's impact on the carbon balance is calculated in the separate EX-Ante Carbon-balance Tool, it was not possible to run a full sensitivity analysis inside the EFA model that changes the total carbon balance impact.

- **Estimated yield loss from soil erosion may be too low in the Base Case compared to some available studies.** If the yield loss factors are trebled from maximum 1.5% to 4.5% - which is still conservative in accordance with some studies (see Pagnos et al. 2018, and Gebreselassie, 2016) – ENPV can increase by 8%. **Note that, this analysis does not take into account climate change which may create increased future soil erosion and yield loss.**

- **The estimated returns could fall by 4-7% if the number of animals per farm dropped by 10-20%.** Further data are needed to determine if households respond by lowering the number of livestock units they own when the yield per animal goes up as noted in a recent livestock impact study for SLMP-II.

- **Results are sensitive to the estimated impact on carbon balance because a 10% reduction in value can reduce ENPV by 4%.** This also implies that it is important that the assumptions entered in the EX-ACT model reflect the project accurately. This includes determining if the emissions reductions of improved cook stoves can be incorporated in EX-ACT or should continue to be valued directly in the EFA model as described above.

34. The main expected net benefits which could not be quantified due to lack of data include:

a) Direct benefits from new income generating activities such as grain-, meat-, dairy-, and bamboo-processing; tree seedling nurseries.
b) Value of improved indoor air pollution from cook stoves.
c) Benefits from improved administration and tenure rights such as conservation of protected areas, biodiversity and tourism.
d) Benefits to other sectors of the economy that will take advantage of increased productivity and resilience in the agriculture sector.
e) Benefits captured in neighboring communities through informal dissemination of improved land and water management practices.
f) Downstream effects of reduced risk of flooding and reduced cost of sedimentation in irrigation schemes.
g) Benefits from improved nutrition such as due to a more varied food production in the area.
h) The value of capacity building among direct beneficiaries is captured in the EFA model. Project funded capacity building and institutional development at all levels have direct value in that they increase the skill level in public sector institutions and enable them to work more efficiently in providing essential and enhanced public good services. These institutional benefits are not quantified in the EFA, but are seen as critical to ensure that the other benefits can be realized when it comes to building productive alliances with access to agricultural financing, land, and other business enabling services.

35. **In light of an ENPV of US$ 1,696 million over 25 years (ETB 47.5 billion) and an ERR of 60 percent and the additional potential net benefits that could not be quantified yet, the project investment is expected to yield significant returns even when considering key risk factors.**

36. Data collection to improve the current EFA analysis and evaluate the project at mid-term and completion could focus on:

a) Validating assumptions behind all changes in WO/P and W/P gross margins for crops, livestock, non-cropland, and storage facilities together with other new IGAs.
b) Validating the assumed farm sizes and cropping/livestock patterns of representative farms including whether project incentives will lead to changes in cropping pattern and stocking rate.

c) Updating the analysis when the budget cost tables are finalized and also explore how to assign shares of the costs to different benefit flows.
d) Continuously ensuring that the EFA analysis is aligned with applicable target indicators in the Results Framework.
e) Refining the estimation of impact on carbon balance using the EX-ACT Model.

ANNEX 5: SOCIAL DEVELOPMENT PLAN: POTENTIAL RISKS, CHALLENGES AND RECOMMENDATIONS

This social development plan as outlined below will ensure that the project and its implementing agencies will respect the dignity, rights and culture of groups meeting the OP4.10 requirements and ensure that these people benefit from the project in a sustainable manner. The plan could be redefined during implementation and further consultation undertaken for the underserved groups to ensure their full participation. The matrix below outlines the component based potential implementation risks and challenges and the suggested mitigation measures based on data generated for the SA using different methods. The budget for the implementation of the SDP activities is included in Component 4, Project Management and Monitoring, for inclusively targeting underserved peoples and vulnerable groups as indicated in the plan and the operational modalities will be included in the PIM.

Component	Potential risks and challenges	Mitigation measures	Responsible body
Component 1: Investment in green infrastructure for resilient watershed	Focus on supporting smallholder farmers to scale up & adopt best-fit sustainable land and water management technologies & practices. Hence there is a possible risk/challenge of not properly addressing the circumstances of population groups such as hunters and gatherers, who peruse peculiar livelihood systems and natural resource management strategies	Devise a mechanism to include ''hunters and gatherers" livelihood strategies into the RLLP program. One example is their tradition beekeeping though largely takes the form of forest honey collection, which can be integrated into the RLLP activities, but with an injection of modern knowledge and technology based on their demand such as beekeeping technology as the latter is more productive, sustainable and environmentally and female friendly.	MoALR-PCU
	The creation of benefit streams through markets and other market based instruments like results-based payments involve the risk /challenge of not properly taking into account the elderly, disabled, and poor members of the community	It is recommended that the project through consultation with the beneficiary communities, devise possible mechanisms on how to make the old, the sick and disabled benefit from the project even when they might not afford to contribute either labor or cash to the project implementation. For example, the elderly people can be used as advisors, the disabled as time keepers, etc.	MoALR-PCU

	Watershed community saving is part of the project activities that helps user groups who voluntarily organize themselves to engage in IGA suitable to their respective environment, but the minimum cash contribution and active participation requirement to run the IGA leaves out some members of the community. This involves the risk of further marginalizing the vulnerable groups. Female household heads & married women may face the risk of not benefiting from the project in equal measures with male counterparts because of not being able to balance their responsibilities with the project related role	The project should devise a mechanism (e.g. interest free loan) by which watershed community members who are likely to be left out due to the inability to meet the minimum membership requirement can also benefit from the scheme. Especial support needs to be provided to women playing the dual roles as mother, household heads and active participation in the project with male community members. Arrangements may be made in consultation with the committees in this respect. Suggested ways to support them balance their competing responsibilities may be implement affirmative action such as allowing them to a certain number of hours or days off from the minimum required time of labor contribution to the project; allocating light works, flexible working environment; for labor work establish working groups comprise male & female, demand driven activities which reduce workload, save time and energy.	MoALR –PCU MoALR-PCU
Component 2: Strengthening institutions & information modernization	Lessons learned from SLMP II show that inadequate attention to the use of locally available indigenous knowledge systems and time-tested adaptation strategies can undermine the potential positive roles	It is highly recommended that locally available social capital such as traditional & indigenous knowledge of land use and natural resources conservation practices for effective implementation of project activities to facilitate and speed up the implementation	MoALR-PCU
Component 3: Rural land administration and	The implementation of land administration and certification should not be based on wholesale or universal application in all project woredas. This is because population groups in the historically underserved project woredas watersheds	Care needs to be exercised to make sure that the land administration and use of the project is not implemented on wholesale basis in all project woreda watersheds, and instead takes into account	MoALR-PCU

use	exercise livelihood strategies that require peculiar landholding and land use arrangements from those of smallholder farming communities. However, implementing the component without due regard for these peculiarities may entail a risk that interferes with smooth project implementation. As previous experience shows there is also risk of female household heads losing their land that they have leased to sharecroppers, who can register to plots in their name for certification against the terms of the sharecropping agreements	the unique landholding and land use characteristics of the historically underserved population groups in the developing regional states The project should consider consolidating grass root institutions such as rural land dispute adjudication and grievance redress structures. Strengthening such establishment plays an important role in making sure that women, parentless HHs and elders who lease their land in sharecropping arrangements will not unfairly lose their landholding rights as a result of the breach of agreements in the land registration and certification process.	MoALR-PCU
Component 4: Project management & Monitoring	In some of the project woredas constraints related to facilities (shortage of vehicles, and motorcycles) In some of project woredas there is turnover /shift of WTC members which affected project implementation	Lack of facilities such as vehicles, and motorcycles have adversely affected the conduct of regular site visits and follow up of project implementation. Proper attention should therefore be given to providing woreda staff with necessary facilities to enable the regularly visit project watersheds and effectively monitor project execution. It is important to staff the project implementation units with the right mix of experts at all levels. Create a system & institutional memory for effective knowledge generation & management by woreda leaders, sectoral office heads & experts. It is also important to organize regular experience sharing visits between woredas to enable smooth transfer of knowledge and skills across project communities	MoALR-PCU

ANNEX 6: RLLP GENDER APPROACH AND ACTION PLAN

General

1. Land degradation has important gender dimensions. The UNDP finds that land degradation increases the pressures on women differentially than men in their effort to meet practical needs of supporting their families under increasingly difficult environmental, physical, social, and economic conditions.[40] Women are also challenged by the consequences of land and environmental degradation induced fuel-wood and water shortage, making their work even more challenging.

2. Analysis also indicated the constraints to women's access to equitable roles in decision-making concerning land resources and their engagement in sustainable environmental and land management such as: (a) insecure land use rights, (b) the low value assigned to labor and subsistence farming, (c) lack of access to credit and (d) lack of opportunities to gain and share technical knowledge[41]. Further, UNCCD[42] illustrated that, often 'women's inequitable access to secure property rights forces them onto marginal, fragile, highly degradable lands'.

3. The Sustainable Development Goal (SDG) Five on achieving gender equality and empowering all women and girls is emphasized as not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. Providing women and girls with equal access to the natural resource base and equal representation in decision-making processes will boost the returns of RLLP investment and benefit broader society. The design of RLLP will therefore create opportunities for women's equal rights to economic resources, as well as access to ownership and control over land and other forms of the natural capital, in accordance with GoE laws.

Gender Dimensions of Land Degradation in Ethiopia

4. Understanding gender aspects of natural resources management is an entry for reversing environmental and land degradation in RLLP landscapes. Women manage natural resources daily in their roles as farmers and household providers; typically, responsible for growing homestead crops, collecting fuel wood and water. Local values and practices have a major impact on the access to natural resources and the level of engagement of women in the agriculture sector. Inequitable access and unequal playing fields has led women farmers to produce on average 23% less than their male counterparts in Ethiopia[43]. However, notwithstanding their reliance on natural resources, women have less access and control than men, despite their constitutional rights to equal land ownership, administration and use. Landless rural women often depend on common property resources for fuel wood, fodder and food. As part of the overall RLLP investment, protection of the natural resources base is at the center, where rural women and men will be empowered to participate in decisions that affect their needs and vulnerabilities, and in turn lend hands for effective interventions for their conservation and sustainable use.

[40] Mother Earth: Women and Sustainable Land Management, Gender Mainstreaming Guidance Series, UNDP 2007
[41] Ibid.
[42] Gender Programme: Empowering Women to Invest in Sustainable Land Management (SLM), the Global Mechanism, United Nations Convention to Combat Desertification.
[43] World Bank and One. 2014. Levelling the Field: Improving Opportunities for Women Farmers in Africa.

Lessons from SLMP-II Gender Focus

5. SLMP-II has used gender mainstreaming as a strategy for making concerns and experiences of women and men an integral part of the design, implementation, monitoring and evaluation of sub project activity. SLMP-II has been able to create jobs, generate income, sustain livelihoods for women and youth in its project components as an integral part of the operation. The following evidence from the SLMP-II midterm review provides the basis for this assessment, including data that is gender-disaggregated.

SLMP-II Gender Focus: Mid-Term Evidence

SLMP-II has made considerable progress in developing and using a gender mainstreaming guideline to ensure the inclusion of gender issues in its subprojects/activities. All reporting in SLMP-II is gender disaggregated. Overall, SLMP-II ensured a 25% proportion of Female Headed Households, while women in Male Headed Households also draw various forms of project benefits. Participation of women in decision making in SLMP-II coordination platforms at different levels of the project implementation (CWT, KWT, WTC, and WSC) is 18.3%. The SLMP-II staffing has 15% women at all levels of the project coordination units.

The gender and youth inclusive approach of SLMP-II in all components benefited men and women, with focused support to vulnerable groups and underserved peoples. SLMP-II is systematically implementing the Social Development Plan which has a gender, vulnerability and youth focus under which soil and water conservation work benefited women (56,525), jobless and landless youth were engaged in paid work (24,192) and landless households were involved in paid work (5,195). The livelihoods improvement interventions, targeting people who have an impact on the natural resource base, focused on households with small landholdings, or the landless and jobless, particularly youth and women. SLMP-II IGAs included women (4,207), jobless and landless youth (2,334), landless households involved in paid work (1,717), and people with disability (110). In addition, improved cookstoves have drastically reduced women's time in collecting firewood.

RLLP Gender Approach

6. The operational steps encompass resilience building through soil and water conservation works, enhanced tenure security, homestead and farmland development, livelihood improvements (access to improved, targeted livelihoods support in rehabilitated watersheds including creating jobs, organized cooperatives, women or girls only), climate smart agriculture, and affordable and innovative technology (household energy). For RLLP, facilitating the acquisition of Improved Cookstoves, will free up women's time, which they could potentially use in developing IGAs. These IGAs could include promotion of improved cookstoves, cultivating fruit trees, bamboo handicrafts, beekeeping, etc.

7. The RLLP components will take into account the different roles of men and women in advancing resilient livelihoods at multiple scales, and respond to the unique interests, priorities and needs of women and men in order to close gender gaps. Women and men at all levels of the RLLP decision making should be involved as key actors in the assessment, design, monitoring, and evaluation of interventions starting from the community watershed committee. Both women and men need to benefit from a gender approach that reinforces their joint participation and equitable benefit in RLLP.

8. An evaluation of gender innovations under RLLP will be carried out as part of the broader

livelihoods impact evaluation. The gender assessment of SLMP 2 experiences helps determine constraints and experiences that limit female and male project beneficiaries', and whether women's ability to realize their equitable benefit from the natural and environmental resources potential were effectively improved by the project's activities/innovations. Based on the findings of the SLMP-II gender assessment, the following major indicators were suggested to guide the gender mainstreaming process in RLLP.

Potential Gender Focus Indicators proposed by SLMP-II Gender Assessment

9. *Core Indicators:*

- Strengthened implementation practices (planning, implementation and monitoring processes) for equitable and meaningful participation of females and males in sustainable land restoration and water conservation practices (50 percent female representation in all stages)
- Integrated landscape management practices adopted by local communities based on practical and strategic gender needs and priorities

10. *Component 1: Integrated Watershed and Landscape Management*

- Households who directly benefited from integrated watershed and land use management (number, men and women)
- Proportion of women involved in the planning and implementation of the natural resource program increased to 50 percent
- Female participation in project coordination platforms (CWT, KWT, WSC and WTC) increased to 50 percent
- Number of gender sensitive technologies demonstrated in the project area (energy, labor and time saving cook stoves, biogas, etc) (Number)[44]
- Number of technologies promoted to public RLLP extension services (total and disaggregated by gender) (Number)
- Provisions to remove public work obligations of pregnant and lactating women, from onset of pregnancy to until 24 months postpartum (PIM)
- Clarify work norms in the PIM, on 50 percent reduction of workload and allocation of light work for women (PIM)

11. *Component 2: Institutional Strengthening, Capacity Development, and Knowledge Generation and Management*

- Formal community-based institutions, self-help groups and associations established and functional (Number of women participants)
- Proportion of women's participation in decision-making processes in watershed steering committee (WSC) and Watershed Technical Committee (WTC) increased from 18.3 to 50 percent.
- No of traditional institutions and leaders that accessed gender training (number, men and women)

[44] This indicator assesses the number of gender sensitive technologies demonstrated by the project. Gender sensitive technologies are defined as: (i) technologies based on needs and interest of female farmers; (ii) technologies that reduce time and labor for women farmers; and (iii) technologies that are accessible and affordable by women farmers.

12. *Component 3: Rural Land Certification and Administration*

- Second level landholding certificates issued (of which female numbers).
- Female-headed households in project area using at least three technology packages supported by the project on individual lands (Number)
- Households who have received second level land holding certificates (sub-indicator women who have received second level land holding certificates individually or jointly with a man (Number))
- Landless youth who have been issued a second level certificate or other legal documentation to use communal land holdings in exchange for restoring land (Sub-indicator - Of which female (Number))
- People participating in income-generating activities supported by the project (Sub-indicator, Of which female (Number))
- Equitable (50 percent) participation of women and men in awareness programs on equal land rights and holdings and in land programs

13. *Component 4: Project Management*

- RLLP M&E report (gender disaggregated data)
- RLLP Gender Impact Assessment (two reports, midterm and end of project)
- RLLP Gender Mainstreaming Guideline (one Guideline)
- RLLP Gender Focused Capacity Building (gender disaggregated capacity building reports and gender focused trainings)
- PIM to integrate gender provisions and tools for improved implementation practices at the grassroots levels (PIM)
- Training plan on the PIM developed, with an earmarked budget (one, training plan)
- Capacity building activities/training on gender mainstreaming and PIM provisions for project implementers at different levels (Number of training sessions)
- Gender sensitive information, education and communication (IEC) materials disseminated to guide implementation of gender dimensions of the project (Number and type of IEC materials)

14. A Gender Action Plan for the RLLP has been developed based on the findings of the SLMP-II gender assessment (including the suggested indicators listed above), and is presented below. In addition to outputs and targets to be achieved by specific dates, this plan also identifies indicators to be reported on in the six-monthly project progress reports (as specified in the PIM to be finalized within one month of project effectiveness), which include the gender-specific indicators of the Results Framework (identified as such in the plan presented below).

Gender Action Plan for RLLP

Activities	Indicators and targets	Timeline	Responsibilities
Impact Statement: Increased climate resilience, land productivity, carbon storage and diversified livelihoods of women and men, including poor and female headed households in selected rural watersheds **Outcome Statement:** Improved access to livelihoods opportunities, information, technology and resources to community members in 152 major watersheds, of which 50% are women and female-headed households.			
Component 1			
Output 1: Higher participation of both men and women in sustainable land restoration and water conservation practices			
• Conduct Gender analysis (Collect, analyze and profile gender norms, customs and values to determine beliefs, perceptions and stereotypes relating to differences between women and men in relation to the program components) • Conduct gender awareness training on division of labor, roles, benefits and participation in sustainable land restoration and water conservation activities • Strengthen implementation practices to ensure female and male representation in planning, implementation and monitoring activities • Gender sensitive information, education and communication (IEC) materials disseminated to guide implementation of gender dimensions of the project • Conduct experience sharing between regions on best practices on gender mainstreaming and women's empowerment • Identify model women and men (couples and families) where gender relations and decision making are more egalitarian; and engage them as "community change agents" in their respective social groups	• One Gender Analysis Report and baseline data • Share of target women beneficiaries with rating "Satisfied" or above on project interventions (aspects: livelihoods, environmental benefits, others) (Results Framework: Intermediate Results Indicator, IR 1a) • Women land users adopting sustainable land management practices as a result of the project (Results Framework: Intermediate Results Indicator, IR 4a) • Female-headed households adopting sustainable land management practices as a result of the project (Results Framework: Intermediate Results Indicator, IR 4b) • Increased participation of women and female-headed households to 50% in sustainable land restoration and water conservation activities • Increased membership of women in different committees such as CWT or WUA, KWT, KLAUC to 50% • Number and type of IEC materials produced and disseminated • Number and percentage of women and men who receive training provided by RLLP, by type of training • Number of experience sharing visits by year • Number of model couples identified and engaged	• 2018 • Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report • By year 2023 • By 2020 • Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report	• Federal Project Support Unit (PSU) at the Ministry of Agriculture and Livestock Resources • Regional Project Coordination Unit of Bureau of Agriculture (BoA) of the 6 regions • Woreda Agricultural Development Offices

Activities	Indicators and targets	Timeline	Responsibilities
Output 2 Higher participation of both men and women in improved and climate-smart agricultural practices			
• Introduce technologies that reduce time and labor of women farmers and FHHs, including improved cookstoves • Train men, women & FHHs on different packages of CSA (Conservation Agriculture, Agro-Forestry, Compost Application, biological measures for soil and water conservation) • Conduct experience sharing between implementing regions on women technology adaptation and promotion	• Impact evaluation of crop yield as a result of CSA intervention disaggregated by male or female-headed households • Number of new technologies introduced to reduce the time and labor of women farmers • Number of experience sharing visits by year	• By year 2023 • Six-monthly Project Progress Report • Six-monthly Project Progress Report	• Federal Project Support Unit (PSU) • CGIAR institutions engaged for CSA impact evaluation • Regional Project Coordination Unit • Woreda Agricultural Development Offices
Output 3: Higher participation of both men and women in CIGs, local value chains & other agri-business initiatives			
• Carryout gender sensitive value chain analysis & mapping of gender roles, relations and challenges along the Value Chain of identified products, as well as the market barriers to entry • Establish CIGs to promote commodities/ products that have the potential for market development (such as vegetables and fruit farming, poultry production, sheep and goat fattening, forage production, apiculture etc.)	• One value chain analysis, which is gender sensitive and maps out gender roles • Female-headed households participating in diversified livelihood activities supported by the project (Results Framework: PDO-Level Result Indicator 5a) • Women participating in income-generating activities supported by the project (Results Framework: Intermediate Results Indicator, IR 6a) • 50% of CIG members participating in income generating activities as a result of the project are female & female headed households	• By 2019 • Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report	• Federal PSU • Regional PSU • Regional Cooperative Promotion Offices • Woreda Cooperative Promotion Offices
Output 4: Gender-sensitive technologies that are accessible and affordable to both men and women			
• Introduce technologies that contribute towards the reduction of deforestation and greenhouse emissions and reduce the workload of women based on the needs and interest of female farmers	• Numbers or percentages of Women and FHHs who have access to and use of gender sensitive technologies in the project area (including energy, labour and time saving cook stoves, biogas digesters, etc.) • Number of CIGs that engage in the production and marketing of improved cook stoves	• By 2020 • Six-monthly Project Progress Report	• Federal Project Support Unit (PSU) • Regional PSU • Bureau of Water, Irrigation & Energy

Activities	Indicators and targets	Timeline	Responsibilities
Component 2:			
Output 5: Building the capacity of institutions implementing the project for mainstreaming gender issues			
• Conduct participatory gender audit process (including the organizational culture and the presence of sufficient human resources to carry out gender-related activities and mainstreaming) in RLLP implementing institutions • Strengthen the capacity of implementing institutions (provide trainings & refreshers) to ensure equitable benefits to women and men	• Gender Audit Report • Number of gender specialists or gender focal persons hired at different levels • Number and percentage of women and men staffs or service providers who received gender training provided by RLLP, by type of training	• By year 2019 • Six-monthly Project Progress Report • Six-monthly Project Progress Report	• Federal PSU • Regional PSU • WB
Component 3:			
Output 6: Improve women's entitlement to land and enforce land certification proclamation			
• Create awareness on the importance of equal land rights and tenure between men & women to reduce gaps between land certification proclamation and its enforcement, with special attention to areas where polygamy was practiced such as Gambella, Benishangul Gumuz and parts of Oromia • Support the capacity of law enforcement institutions such as courts and local administrative organs, on existing laws and land certification proclamations, with special attention to areas where polygamy was practiced such as Gambella, Benishangul Gumuz and parts of Oromia	• Equitable (50%) participation of women and men in awareness programs on equal land rights and holdings • Women who have received second level land holding certificate individually or jointly with a man (Results Framework: Intermediate Results Indicator, IR 11a) • Women landless youth who are members of groups who have been issued a second level certificate or other legal documentation to use communal land holdings in exchange for restoring land (Results Framework: Intermediate Results Indicator, IR 12a) • Number of law enforcement officials sensitized or trained on land certification	• Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report • Six-monthly Project Progress Report	• Federal Project Support Unit (PSU) • Regional Project Coordination Unit • Woreda Agricultural Development Offices
Component 4			
Output 7: Enhanced gender perspective in program design, implementation, monitoring, evaluation & reporting			
• Capacity building/ training for partners and implementers on collecting and analysis of sex-disaggregated information • Develop and disseminate simple gender responsive reporting format that includes both quantitative and qualitative analysis of periodic implementation reports	• No. of implementers sensitized or trained on gender sensitive project design, implementation, monitoring and evaluation • Gender sensitive M& E framework • Number of periodic gender sensitive reports (sex disaggregated data presented) • Number of supervision visits	• Sex-disaggregated baseline Information in 2018 • Revised PIM by 2019 • RLLP Mid-Term Gender Impact	• Federal Project Support Unit (PSU) • Regional Project Coordination Unit of BoA of the 6 regions where the project is implemented • Woreda Agricultural Development Offices

Activities	Indicators and targets	Timeline	Responsibilities
• PIM to integrate gender provisions and tools for improved implementation practices at the grassroots levels	• PIM	Assessment Report by 2021 • RLLP Final Evaluation Reports by the end of project	• WB

ANNEX 7: RLLP MAP